Drug and Cosmetic Industry

June 1956 Vol. 78 No. 6

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"This is it. A sleeping dose for night, a wake-up dose for morning, and a tranquillizing dose for the day—all in one capsule."

Keeping Posted

Smith Heads H.I.F.

George F. Smith, president of Johnson & Johnson, has replaced W. L. Dempsey as chairman of the board of directors of the Health Information Foundation. Mr. Dempsey is no longer connected with the drug industry. George Bugbee continues as president; Eugene N. Beeseley, president of Eli Lilly and Company, was elected vice-president; Henry S. McNeil, president of McNeil Laboratories, was elected secretary; and S. Barksdale Penick Jr., president of S. B. Penick & Company, former secretary-treasurer, continues as treasurer.

Ten new directors are: John G. Bill, president of Sharp & Dohme; Francis C. Brown, president of Schering Corporation; George R. Cain, executive vice-president of Abbott Laboratories; John T. Connor, president of Merk & Co.; Alfred D. Driscoll, president of Warner-Lambert Pharmaceutical Company; Melvin C. Eaton, chairman of the board, Norwich Pharmacal Company; Nelson F. Gamfer, president of The Wm. S. Merrell Company; Henry S. McNeil; E. Claiborne Robins, president of A. H. Robins Company; and Robert P. Scherer, president R. P. Scherer Corporation.

"Of a total of more than $10 billion in private medical care costs annually," Lowell T. Coggeshall, M.D., special assistant for medical affairs, Department of Health, Education and Welfare, told the Foundation, "only a little more than $2 billion—22 per cent—is now being met through insurance benefits. . . . Of course, no one expects voluntary insurance arrangements to meet medical care costs completely—but insurance can and should meet more than a fourth or fifth of them."

"Five areas which offer opportunities for expanding and improving voluntary health insurance the better to meet the ever changing and desires of the people," were listed by Dr. Coggeshall: Coverage of major or catastrophic illness; the development of comprehensive coverage, including that for outpatient services; coverage of older persons; higher income ceilings in surgical plans; and better coverage of persons who are not members of organized groups and those with low incomes.

Squibb Sales in 1960

Sales of the E. R. Squibb & Sons Division of Olin Mathieson Chemical Corporation are expected to total $206,400,000 in 1960, according to John W. Hanes, chairman of the Olin Mathieson Finance Committee, who predicted that total sales of Olin Mathieson in 1960 would total $1.2 billion—115 per cent above 1955 totals—and that 17.2 per cent of this total would be in drugs and pharmaceuticals.

The major increase in sales is to come in the metals business, particularly aluminum and brass, and this category of products is expected to increase from $69 million in 1955 to $288.8 million in 1960. Prior to the merger in 1953, Olin Industries total sales were $288.3 million, and Mathieson's sales were $243.3 million. Sales of the various categories of products in 1960 are expected to show the following percentages of total sales: Winchester Western and Explosives 18.5; metals 12.3; drugs and pharmaceuticals 17.2; film, paper and forest products 12.8; plant foods and phosphate chemicals 18.2; industrial chemicals 20.9.

This expansion will come from within, says Mr. Hanes, who adds that the era of mergers and acquisitions has ended.

Schering Research Facts

In the past thirteen years, Schering Corporation spent $15 million for research of which $8.1 million was spent since 1952 when the company first came under public ownership. During the last seven years alone, the products derived from this research program produced about $74 million in sales, or 65 per cent of total sales during this period. Schering president Francis C. Brown says:

"We shall continue to spend heavily for research. Pro-

ATLAS chem-memos

ATLAS POWDER COMPANY, WILMINGTON 99, DEL. • ATLAS POWDER COMPANY, CANADA, LTD., BRANTFORD, ONTARIO, CAN.

SORBITOL, MANNITOL AND RELATED POLYOLS • EMULSIFIERS, SOLUBILIZERS

Atlas surfactants help create new effects in hair preparations

When you're investigating formulas for new hair preparations or thinking of ways to improve existing products, you'll find Atlas non-ionic emulsifiers and detergents can often put exceptional *plus* values into the final product.

W/O lotion-type hair dressings. Relatively large amounts of water can be dispersed in this type of product by using ARLACEL® 83 emulsifier (sorbitan sesquioleate). Because of its exceptional water-holding power, ARLACEL 83 gives formulators wide latitude of ingredient choice and formulating procedure for W/O products . . . assurance of emulsion stability with less "greasy feel".

O/W lotion-type hair dressings, which are washable, can be formulated to high stability, over a wide range of variation in petrolatum-oil-lanolin-water content through use of TWEEN® water-soluble emulsifiers (polyoxyethylene sorbitan fatty acid esters) in combination with ARLACEL oil-soluble emulsifiers (sorbitan fatty acid esters).

Hair dressings containing lanolin. The emollient effect of lanolin can be attained much more easily in hair preparations through the use of Atlas lanolin derivatives than with lanolin itself. These ethylene oxide derivatives of lanolin and sorbitol-lanolin possess varying degrees of solubility in water or oil, as desired. They may be used as primary or auxiliary emulsifiers in O/W emulsions, or as auxiliary emulsifiers in W/O emulsions.

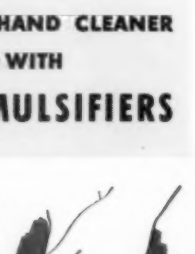
For use in shampoo formulations, Renex 20 is a 100% active synthetic detergent which enables the formulator to incorporate excellent hard-water rinsability. It may be compounded with soap or other usual ingredients to prevent soap scum or film in the hair. Chemically, Renex 20 comprises polyoxyethylene esters of fatty and resin acids.

All of these Atlas products have been subjected to extensive clinical testing and found suitable for use in formulas for topical application.

Forward-looking formulators use ATLAS emulsifiers

. . . like John H. Breck Inc., Springfield, Mass., internationally famous manufacturers of hair preparations.

"WATERLESS" HAND CLEANER FORMULATED WITH ATLAS EMULSIFIERS



An interesting type of cleaning agent lets you "wash" your hands without using water for rinsing. It's a lotion-type material that only needs to be rubbed on the hands to loosen soil. Wipe it off with a towel or tissue, and your hands are clean and soft. The towel can be laundered in cold water.

This product is relatively simple to manufacture. The following procedure may be used as a guide in formulation. Add 42-57% of water at 62° C. to a mixture of 30-45% deodorized kerosene, 3% lanolin and 10% emulsifier at 60° C. (All percentages based on total formula weight.) Agitate until cool. The emulsifier is a blend of 75% TWEEN 40 and 25% ARLACEL 40, or a blend of 85% TWEEN 60 and 15% ARLACEL 60.

portionately to our sales in 1955, our research expenditure dropped, but in total dollars we spent more, and I believe we should gradually increase our expenditures until we lead the industry in the percentage of our sales devoted to research. . . . We intend to plow back large sums into steroid research because of the strength we have in this field, both in manufacturing and research competence. We also intend to research in fields related to mental health, virtus diseases, and the aging processes, particularly in circulatory disorders."

Bishop Hair Experts Cited

Bishop Hair Experts, Cincinnati, is charged by the Federal Trade Commission with falsely claiming that it can grow hair. The firm, according to the Commission, encourages treatment with its preparations either in "clinics" or in the home. Advertising has claimed that "Baldness can be prevented in almost every case . . ."; "We can save and thicken the hair you have . . ."; and "In almost every case, baldness starts with some local scalp disorder . . . and every one of these . . . can be corrected quickly by Bishop Hair Experts."

Regardless of the combinations and amounts of ingredients used or the method of treatment either in the concern's offices or in the home, the complaint charges, the concern cannot prevent baldness or grow hair in the most common cases known as "male pattern baldness." In addition the treatments will not, as claimed, replace fuzz or thin hair with thicker hair or permanently eliminate dandruff, itching, dryness, or oiliness of the hair or scalp.

The concern claims it operates offices in 14 cities, including San Franisco, Montreal, and Mexico City, says the complaint. In fact, it is charged, of the cities named, the concern has offices only in Pittsburgh, Cincinnatti, and Buffalo. Further, charges the complaint, the concern's "trichologists" have no competent training in dermatology or any other branch of medicine pertaining to the diagnosis or treatment of scalp disorders.

Loynd—Foreign Trader of Year

Harry J. Loynd, president of Parke, Davis & Company, was named Foreign Trader of the Year by the Foreign Trade Club of Detroit. Mayor Albert E. Cobo of Detroit made the presentation of the award before a group of 250 civic, government, and industrial leaders headed by Governor G. Mennen Williams last month. Herbert J. Cummings, director, Near Eastern and African Division of the U. S. Bureau of Foreign Commerce, was the featured speaker.

Since Mr. Loynd became president of Parke, Davis in 1951, he has made frequent trips to foreign countries, visiting their 28 branches and 70 distributors in the Far East, Europe, Central and South America, Asia, Australia, and South Africa. Last year, he completed a round-the-world trip. He has visited every Parke, Davis overseas branch office and manufacturing laboratory from London to Bombay and from Mexico City to Johannesburg.

Fluoride Dentifrice Market

Because of the fact that the drive for fluoridation of municipal water supplies is far from an end, there might be many who would figure that the market for fluoride toothpaste in this country might be a steadily declining market of comparatively short duration. However, this is not the way the manufacturers of these types of dentifrices figure it out.

In the first place, it is estimated that fluoridation of water supplies will never be carried to an extent that will reach more than 45 to 50 per cent of the population of this country. This is for the reason that installation of fluoridation control equipment is relatively expensive and small towns and village often will not be willing to bear this cost. Furthermore, rural areas will never have their water fluoridated. Therefore, at the worst, the market for fluoride dentifrices cannot be less than half the people of the country.

But above and beyond this lies the fact that fluoridation of water supplies benefits no one but children under six years of age. Every man, woman, and child over this age receives absolutely no benefit to his teeth from fluoride present in the water he drinks. Therefore, until the children below six years old, who have lived in areas in which the water has been fluoridated sufficiently long to benefit them, grow up and replace other people in the population who die, there will still be a market considerably greater than 50 per cent of the population.

As a matter of fact, of the approximately 170,000,000 men, women, and children in this country, children under six years old number only about 23 million, or 13.5 per cent. And this includes infants and other very small children who certainly do not think very highly of brushing their teeth. The market, therefore, starts out at somewhere above 86.5 per cent of the population of the country, and theoretically declines yearly by the number of children reaching six years old who have been subject to fluoridation of their drinking water. Since the births in this country have ranged between three and one-half million to four million over the past number of years, this decline would amount each year to no more than one-half of 3,750 (assuming 50 per cent of water supplies are fluoridated), or about one per cent a year.

The Polio Outlook

According to Basil O'Connor, "Paralytic polio in the United States can be cut in half during the epidemic period in 1956 and can be cut to a negligible amount in 1957 if there is a coordinated effort during the remaining months by all concerned: the public, the public health services, the doctors, and the manufacturers." The reason the president of the National Foundation for Infantile Paralysis made this prediction is that manufacturers of the Salk vaccine estimate that they will produce 203 million cc. between March 1 and December 31 of this year. They also estimated that 92 million cc. of this material will be produced between March 1 and July 10, and that 111 million cc. will be produced between July 10 and December 31.

Two groups, the age group 0 to 19 inclusive and the

Vitamins in Pharmaceuticals

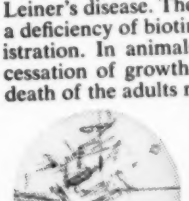
A REPORT

Use of Biotin in Multivitamin Formulae

Biotin, now firmly established as an important member of the vitamin B complex, belongs in multivitamin formulae and dietary supplements for the reasons given below.

D-biotin is required for the growth of many organisms: animals, plants, bacteria. It appears to be related to the process of cell development. Symptoms of deficiency have been shown to occur in human beings who live on diets high in raw egg white.

Deficiency symptoms appear as severe dermatitis lesions, similar to seborrheic dermatitis and a desquamating disease of infants called Leiner's disease. These symptoms, when due to a deficiency of biotin, disappear after its administration. In animals, dermatitis, loss of hair, cessation of growth of the young and sudden death of the adults may occur.



Nearly 200 papers directly related to biotin research are in the literature. The work of investigation continues.

The evidence now available points to the need for biotin in multivitamin and dietary supplements which, by their very nature, are prescribed for therapeutic and prophylactic effect.

The Place of Biotin in Antibiotic Therapy

Rat feeding experiments using some of the sulfonamides show that the animals develop biotin deficiency. The same result has been found and reported from the use of antibiotics. It has been assumed that the same development might occur in man when this therapy is used. Under the circumstances, biotin should be included in stress formulae and in multivitamin supplements which are prescribed so often during and after the administration of these modern drugs.

Usage in Veterinary Medicine

In dogs and dairy calves it has been found that a deficiency of biotin will cause a paralysis of the hind quarters. This condition was cured by the administration of the vitamin. In chicks and turkey poults a biotin deficiency, represented by a dermatitis of the feet, may be overcome by the use of biotin in the feeding formula. A substantial increase in hatchability was found when hens were fed a ration known to be rich in d-biotin.

This evidence indicates that biotin has a definite place in veterinary medicine and animal nutrition.

Technical Data

Empirical Formula ..... $C_{10}H_{16}O_3N_2S$

Molecular Weight 244.3

Slightly soluble in water and 95% alcohol. Insoluble in ether, acetone and ethyl acetate. Soluble in d-panthenol.

Thermostable in dry crystalline form.

Not sensitive to light.

Not affected by reducing agents that may be present in polyvitamin and other pharmaceutical preparations.

The brilliant Roche synthesis of 1946 makes biotin readily available in pure form at a relatively modest cost.

Roche, a world leader in vitamin research and production, has a wealth of information about biotin. Skilled technical people are ready to help you incorporate biotin 'Roche' in your preparations.

New Edition of Brochure

Send now for your personal copy of the Roche technical brochure about d-biotin. Second edition is now available, complete with survey of recent literature and up-to-date bibliography. Ask your Roche salesman or write the Vitamin Division, without obligation.

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pregnant women, together totaling 65 million people, have 80 per cent of paralytic polio, points out Mr. O'Connor. "Assuming an 80 per cent acceptance of the vaccine," he said, "this would mean that 52 million of the 65 million in these two groups would be vaccinated. On the basis of present estimates of manufacturers there would be enough vaccine available to give two shots to the 52 million in these two groups," he added, pointing out that this would require a total of 104 million cc.

With the 42 million cc. released as of March 1, 1956, plus the estimated production of 92 million cc. expected to be ready between March 1 and June 25, this would make available a total of 134 million cc. or "enough to give 67 million people two shots of vaccine," said Mr. O'Connor. This is 15 million more people than those considered available in the two groups which total 52 million.

Twenty-Five Years of Fair Trade

A Silver Jubilee Conference on Fair Trade was held in New York last month by the Bureau of Education on Fair Trade. Walter R. Beardsley, president of Miles Laboratories, who presided at the morning session, said: "We are witnessing once again how the unbridled competition of price-cutting eats away at and ultimately destroys competition itself. We see a frightening concentration of distribution in several of the states whose courts have ruled effective fair trade. So here is what happens when the rules for competitive decency are removed and the rule of the jungle prevails—so-called competition is made a means to monopoly. . . . To give lip service to fair trade and to wink at violators is just as short-sighted and dishonest as the practice of bait price-cutting itself is. Such a manufacturer is kidding himself—and you don't build a sound business by kidding yourself, your dealers or the public."

Everett I. Willis, who served as counsel for Eli Lilly and Company in the first test case on the McGuire Act, said: "The most lamentable and unjustifiable blight on fair trade today has resulted from the erection in six states of a 'double standard' in the application of the Constitutional guarantee of due process of law. The highest courts in these six states—Arkansas, Florida, Georgia, Michigan, Nebraska, and Oregon—have refused to recognize and apply the pronouncements of the U. S. Supreme Court that the fair trade laws satisfy all the requirements of due process of law. How can it be that what *is* due process for the nation as whole is *not* due process in one of the states?"

P.D. Wins Ad Award

Parke, Davis & Company has won the award of the Saturday Review, weekly magazine, "for distinguished advertising in the public interest" during 1955. More than 400 advertising campaigns in magazines were screened, and 105 survived for the final balloting by 28 judges, including leading educators, editors and publishers, research analysts, scholars and advertising and public relations executives.

More Dentists in U. S.

There are 97,529 dentists, or one for every 1,667 persons, in the United States, according to statistics gleaned from the 1956 American Dental Directory of the American Dental Association. The total includes 90,239 civilian dentists and 7,290 in the armed forces, U. S. Public Health Service, and the Veterans' Administration. This latest estimate shows 1,646 more dentists than last year when it was estimated there was one dentist for each 1,669 persons, and 3,803 over the 1954 figure when the ratio stood at one dentist for each 1,677 persons.

The eastern part of the country and the west coast continue to be served by more dentists in proportion to population than other parts of the country. The regional leader, with one dentist for every 1,402 persons, includes Delaware, the District of Columbia, Maryland, New Jersey, New York, Pennsylvania, and West Virginia. The New England area is second with one dentist for each 1,497 residents, and the Far West, including California, Nevada, Oregon, and Washington, is third with one dentist for every 1,504 persons. While the least favorable ratio continues to exist in the Southeast area, this region also continues to show the greatest gains proportionately in the number of dentists. The report shows that the Southeast has one dentist for every 3,160 in 1955, compared with one to 3,468 in 1953. In other areas the population per dentist is: Central States, 1,683; the Northwest, 1,817; and the Southwest, 2,962.

New York State is the individual leader with one to 1,127, District of Columbia second with one to 1,128, and Minnesota third with one to 1,348. The least favorable ratios were reported for South Carolina with one to 4,886, and Mississippi with one to 3,908.

Doctors Up By 3,800

A net gain in the number of doctors in 1955 was 3,800. Licenses were issued for the first time to 7,737 doctors, and 3,937 physicians died during the year. The increase in doctors during 1955 was 450 less than the 4,250 gain registered in 1954, which was a record year exceeded only by 1946. The addition of physicians to the population on the basis of geographical areas was listed in the following order: East North Central, 1,584; Middle Atlantic, 1,506; South Atlantic, 1,141; West North Central, 843; West South Central, 782; Pacific, 779; East South Central, 576; New England, 422; and Mountain, 157.

Mennen Baby Foundation

The Mennen Company has formed the Mennen Baby Foundation, described as "a non-profit organization devoted to elevating and upholding standards of baby care." A Scientific Advisory Committee, headed by Sidonie M. Gruenberg, formerly Director and now Special Consultant to the Child Study Association, as chairman, has been formed to "guide the organization in its activities so that the Mennen Baby Foundation will undertake such activities as will prove most valuable to the nurses, doctors and hospitals as well as

DOW

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FOR THE "SOOTHING EFFECT" IN YOUR LOTIONS

... lotions and creams quickly become customer favorites when they soothe and soften without stickiness

To the formulator it's known as emollient action—to the woman who buys, it's "that soothing effect". Whatever the description, that important quality is always in your product when you use Dow propylene glycol, U.S.P.

Important, too, is the economy of formulation many manufacturers have experienced by replacing more expensive ingredients with propylene glycol.

You may also be interested in propylene glycol's effectiveness as a carrier, humectant and preservative in these or other types of cosmetic preparations.

Dow propylene glycol, U.S.P.—standard of dependability in quality and supply—is now shipped from strategically located terminals across the country for faster delivery.

To improve your product—and your profit—send for a free sample and information on the properties of propylene glycol, U.S.P. Write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Dept. OC 813G-1.

you can depend on DOW CHEMICALS

DOW

the general public." Also serving on this committee are: Dr. Leona Baumgartner, New York City Commissioner of Health; Dr. Horace L. Hodes, pediatrician, Mt. Sinai Hospital; Dr. William S. Langford, Director Pediatric Psychiatry, Columbia Presbyterian Medical Center; and Dr. Preston A. McClendon, Professor of Pediatrics, George Washington University Medical School and Hospital.

Rubinstein Settles with FTC

Helena Rubinstein, Inc., has been prohibited from discriminating among customers in granting sales promotion aids in a consent order issued by the Federal Trade Commission. The order is the last of four agreed to by cosmetic firms following Commission complaints issued November 8, 1955. The order requires that Helena Rubinstein make promotional allowances and services available to competing customers on proportionately equal terms. The agreement is for settlement purpose only and does not constitute an admission by the company that it has violated the law.

Pfizer Spectrum Now Through Mail

Pfizer Spectrum, the illustrated medical service publication which has been bound into the Journal of the American Association for the last four years as a twelve-page insert, is now to be distributed by mail directly to doctors. Starting in the J.A.M.A. in June 1952, the first issue distributed by mail was that of May 15. E. W. Whitney, Pfizer advertising director, explains, "We are now sending Spectrum direct to the physician because we can expand its scope to include additional features and other material. Spectrum will run 24 to 32 pages. Also we have had many requests from doctors for unbound copies which we were not able to fill while we were appearing in the Journal." Spectrum will be published twice a month, on the 1st and 15th, except for single appearances in July, August, and September.

Sharp & Dohme Ships Vaccine

The Sharp & Dohme Division of Merck & Co. started shipping Salk polio vaccine last month for the first time. These supplies, released by the National Institutes of Health and consisting of approximately 800,000 doses were distributed in all states in accordance with allocations set up by the U. S. Public Health Service. "Additional lots of vaccine can be expected from the expanded production program which the company has put into effect to help meet the need for the vaccine," said Sharp & Dohme pre ident John G. Bill. He added that the company's vaccine manufacturing facilities will reach full production by the coming Fall.

Sharp & Dohme's production of polio vaccine was just getting under way when the matter of safety and retesting became a national problem last June. Production was halted before any S. & D. vaccine was ready for distribution, and intensive research was done on manufacturing processes and testing.

Buffered vs. Plain Aspirin

Stating that his findings are at variance with the "accepted tenet that antacids favorably influence salicylate administration," Dr. Robert C. Batterman of the Flower-Fifth Avenue Hospital, New York, says that intolerance to buffered aspirin increases progressively and reaches the point at which it is not so well tolerated as plain aspirin in the treatment of chronic pain associated with musculo-skeletal conditions, including arthritis. Dr. Batterman's tests disclosed that plain aspirin and buffered aspirin are absorbed from the gastro-intestinal tract in approximately the same time. It was further demonstrated that initial doses of aspirin are more effective than buffered aspirin for relief of musculo-skeletal pain. Continuous administration of the two agents resulted in the same degree of effectiveness.

Comparing effect, patients were given ten grains of aspirin with and without a buffering agent every four hours for four daily doses over a week. Results showed aspirin more effective than buffered aspirin at the first dose but the incidence of intolerance was the same. However, intolerance to buffered aspirin increased progressively "so that it is greater than aspirin with chronic administration." Four patients discontinued the buffered aspirin at the end of one week due to intolerance.

"A satisfactory response to buffered aspirin was only attained after two or three days of continuous administration, so that at the end of one week the responsitiveness of buffered aspirin and aspirin was identical," said Dr. Batterman.

Up to this report, the belief has been generally accepted that buffered aspirin was superior to ordinary aspirin on several counts. Whether this report will be confirmed and followed by many others is the question. Naturally this report was given publicity by Sterling Drug, owner of Bayer's Aspirin.

K&K Cold Medicine Claims

K & K cold medicine will not cure colds and generally clear up the accompanying symptoms, according to a Federal Trade Commission complaint issued against Clemmie L. Carmichael, who trades as Dex Pharmacal Co., and Irving C. Harris and Pauline B. Harris, partners trading as Veltex Co., United Chemical Co. and T-Lax Products Co., Birmingham, Ala. Claims made, most over radio stations, are: 1, will cure colds; 2, is effective treatment for coughs due to colds, sore throat, astha, hay fever; 3, will prevent pneumonia and make one healthy; 4, in case of colds will open up bronchial tubes, alkalize the system, relieve aches and pains, and reduce fever and soothe the after effects. The complaint alleges that the value of K & K, when used as directed, is limited to affording temporary relief of coughs due to colds and of minor throat irritations.

Lederle Medical Grants

Grants totaling $234,853 have been made to sixteen outstanding medical school teachers and researchers

for the 1956 American Cyanamid Company's Lederle Medical Faculty Awards. "The basic purpose of the grants is to help assure schools and universities adequate funds to maintain promising medical men in teaching and research posts," explains American Cyanamid President K. C. Towe, "The awards are intended to augment salaries or to aid schools in filling such positions." Recipients of 1956 awards are 16 in number: Dr. William T. Kabisch, Anatomy, University of Chicago; Dr. Richard H. Webber, Anatomy, Creighton University; Dr. John R. Overman, Bacteriology, Duke University; Dr. John B. Lyon Jr., Biochemistry, Emory University; Dr. Guido Majno, Pathology, Harvard Medical School; Dr. Felix Friedberg, Biochemistry, Howard University; Dr. Hampton W. Schirer, Physiology, University Kansas; Dr. Andre Lemonde, Biochemistry, Laval University; Dr. Kenneth F. Girard, Bacteriology, McGill University; Dr. Rother R. Johnson, Microbiology, Meharry Medical College; Dr. Lee Wattenberg, Pathology, University of Minnesota; Dr. John H. Fodden, Pathology, University of South DaRota; Dr. Henry E. D'Amato, Pharmacology, Tufts University; Dr. Edmund H. Fischer, Biochemistry, University of Washington; Dr. Sarah Luse, Pathology, Washington University; Dr. Paul B. Hagen, Pharmacology, Yale University. All awards are for three years with the exception of those for Dr. Lemonde and Dr. Fodden, which are for one year. Grants are limited to three years, and $10,000 per year.

Arthritis Claims Questioned

Kelvin Pharmacal Company, Chicago, has been charged by the Federal Trade Commission with misrepresenting that Sanforin is a new medicine that will cure all kinds of arthritis and rheumatism. Advertisements have claimed, according to the FTC that Sanforin: 1, is a new discovery or new medicine; 2, is an adequate, effective, and reliable treatment for all kinds of arthritis, rheumatism, neuritis, bursitis, and sciatica; 3, will arrest the progress of, correct the underlying causes of, and cure these diseases; 4, is an adequate, effective, and reliable treatment for the symptoms and manifestations of these diseases and will afford complete and long lasting relief from the pains accompanying them. The complaint charges that Sanforin will do none of these things, at most giving temporary relief from minor pain.

Fair Trade for Gasoline

To those who are not acquainted with the fact that the State of New Jersey has more than its share of oil refineries, it might not also be known that this state is a motorist's paradise so far as gasoline price wars are concerned. The dumping of unbranded surplus gasoline at odd times to reduce stocks on hand in this refining area, periodically breaks down the entire market for all brands of gasoline sold in the State.

However, recently, Esso Standard Oils Company, largest marketer of gasoline and one of the largest corporations in this country, has adopted a fair trade program under the New Jersey Fair Trade Act. George W. Butler, manager of Esso's New Jersey sales division, said:

"For several years Esso dealers in New Jersey have been conducting their business under serious handicaps. Some dealers have sold our products at unjustifiably low prices, to the detriment of most Esso dealers, by forcing them to sell our products at prices which did not provide them a reasonable return. The continuance of the practice can cause injury to the Esso name and the good will attached to that name by the motoring public.

"The Esso dealer runs his own business. He is not on the Esso Standard payroll. We do not employ him, but we are deeply concerned with his welfare. Accordingly the company feels it must take this important and unusual step in its interests and in the interest of the majority of its dealers."

Here is new test for fair trade and one that could be somewhat rugged. The dumping of surplus of gasoline in New Jersey will have to be pretty well controlled before dealers in any brand of gasoline are going to be satisfied with fair trade. From some of the prices we have seen quoted in these gasoline wars in New Jersey, it is going to take something more than just a good brand name to overcome the sharp differentials in prices.

Soap Tonnage Up

Total tonnage of soap for the first quarter of this year stood at 1.6 billion pounds, up 13.2 per cent from the first quarter of 1955, and up 16.5 per cent from the last quarter of 1955. Sales of synthetic detergents, solid and liquid, now representing 60 per cent of the market, an increase of three per cent from the previous quarter, totaled 694,134,000 pounds, up 25.6 per cent from the first quarter of last year, and up 21.6 per cent from the fourth quarter of last year. Liquid detergent sales continued an upward trend to 64 million pounds for the first quarter of this year, 95.3 per cent ahead of the first quarter of 1955, and 38.9 per cent ahead of the fourth quarter of 1955. Total soap sales, solid and liquid, for the first quarter of 1956, totaled 312,214,000, off 7.1 per cent from the first quarter of 1955, but up 6.5 per cent from the last quarter of 1955.

Vic Williams Honored

Not only did the American Drug Manufacturers' Association honor by resolution the fiftieth anniversary of food and drug control in this country, but also by resolution it honored one who served it long. The occasion for this resolution was the fact that Victor E. Williams, vice-president of Monsanto Chemical Company, has served on the A.D.M.A. Entertainment Committee for twenty-five years. And Vic, who joined Monsanto in St. Louis in 1915, came to New York for Monsanto in 1925—and never went back—looks and acts as if he is good for at least another twenty-five years on the committee.

Planning the Research Program of a Pharmaceutical Company*

by T. F. Davies Haines
PRESIDENT, CIBA PHARMACEUTICAL PRODUCTS INC., SUMMIT, N. J.

This paper gives an insight into the facts surrounding the research activities of the pharmaceutical industry, revealing data and thinking upon which these programs are based. Much of this is applicable to any major research program, including the cosmetic industry.

According to the recent study conducted by the National Science Foundation, of the more than five billion dollars spent on research in the natural sciences and engineering in the United States in 1953, $3.7 billion was spent by private industry. This huge sum represents only the running expenses of the manufacturers' research departments, and does not include the cost of such new laboratories and other research facilities as may have been constructed by them during the year.

The main incentive in any industry to conduct research is provided by the technological rivalry existing between the members of the industry. The ethical pharmaceutical industry is intensely competitive. Thus in no industry is research more important and in no industry, probably, has it been more productive. This is proved by industry statistics. The volume of the ethical drug business at the manufacturers' level has risen from less than $350,000,000 in 1940 to over $1,200,000,000 in 1955; 36 per cent of the prescriptions written in 1955 were for drugs that were unknown four years ago; and some 400 new pharmaceutical products were introduced in 1955 as compared with less than 100 in 1940. It is the research in chemistry and medicine of the past quarter century that has created the pharmaceutical industry of today, and it is the continued productivity of its research effort that will constitute the most important single factor in the growth of the industry in the years to come.

Successful research for a pharmaceutical company, therefore, is the prerequisite not only of expansion of sales and earnings but even of mere survival, and so is essential for the company that would remain the master of its fate.

Competition and the making of profits are not, however, the only or even the most important incentives to research in the pharmaceutical industry. This industry concerns itself with those sciences to which is attached the greatest public interest—the physiological and medical sciences—with sickness and health, with life and death, with the very basis of the physical welfare of mankind. The advancement of these sciences and the promotion of this welfare are, therefore, powerful incentives to research and are not long absent from the minds of those engaged in this absorbing work.

Thus it is natural that we in the pharmaceutical industry consider research our most important single activity, and that we devote a great deal of thought and effort to the planning of our research program.

Problems not Applicable to Pharmaceuticals

The problems that arise in planning the research program of many companies outside the pharmaceutical industry are either totally absent or at least greatly reduced in the case of pharmaceutical companies. It will focus attention on the problems that do face a pharmaceutical company to dispose first of some that do not arise.

Many companies outside the pharmaceutical industry have widely diversified interests and a deliberate policy of still further diversification by entering new fields. Pharmaceutical companies, on the

*Presented before Conference on Industrial Research, Harriman Campus of Columbia University, June 12.

other hand, have as a rule no intention of entering the plastics, the fertilizer, or other fields not related to medicine. The training, interests and general approach of the entire staff is so centered on medicine and the markets for medicinal products that it is hardly conceivable that they could successfully spread their efforts to embrace other fields. Thus the planners of their research programs do not have to take into consideration projects outside the single area of pharmaceutical products, and to a great extent this simplifies the process of setting up the research program. Certain of the best-known pharmaceutical firms are, to be sure, divisions of large and diversified enterprises. This is true of CIBA which produces dyestuffs, plastics and other chemical products in addition to drugs. From the very nature of the ethical pharmaceutical business, however, the pharmaceutical divisions of such diversified enterprises must from the research point of view be treated as autonomous organizations and their research programs be planned without regard to the other branches of the business.

Another difference between the pharmaceutical and other industries is that, except possibly for antibiotics, the size and cost of the manufacturing plant is low in relation to sales. Thus the planners of the research program do not usually have to worry about whether or not their companies have the manufacturing facilities and financial resources required to put into production such products as may come out of a successful research effort.

Allied to this factor is the comparatively small volume in terms of gallons or tons in which even the most successful drug is produced. This means that the availability of cheap raw materials and the assurance of being able to develop economical manufacturing processes do not, as in many other branches of industry, have to be weighed in advance in designing the research program.

A final difference to be noted is that, although in many industries the fact that the potential market for a new product and its profit possibilities are small would render it an unattractive subject for research, this is not necessarily true in the pharmaceutical industry. If a new product can be found which has unique advantages for the treatment or diagnosis of a disease which may exist only rarely, it would still be a valuable addition to the line of a pharmaceutical company. In addition to the benefits such a product would bring to those suffering from the disease, its introduction would enhance the reputation of the company with the medical profession and thus indirectly aid the sale of other products from which a higher profit return can be expected.

Factors Governing Research in Pharmaceuticals

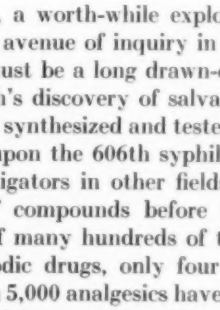
We will now turn to the factors which in a broad sense govern the research programs of drug manufacturing companies.

(a) *Need of Continuity of Support*

The basic concept to be grasped in order to understand what is meant by "planning the research program" is that the program must be designed to extend over a considerable number of years and so will need long-term financial support. Any attempt to plan from year to year and hence to operate on fluctuating budgets would be fruitless. This is so for a number of reasons.

First of all, the assembly of the necessary highly skilled and diversified staffs, and the providing of the laboratory, pilot plant and other essential facilities takes years.

Furthermore, a worth-while exploration of even a strictly limited avenue of inquiry in a narrow field of investigation must be a long drawn-out process. The story of Ehrlich's discovery of salvarsan is known to most people; he synthesized and tested 605 compounds before hitting upon the 606th syphilis-destroying salvarsan. Investigators in other fields must test even larger series of compounds before they can expect success. Out of many hundreds of tested and classified antispasmodic drugs, only four are now widely used. More than 5,000 analgesics have been discovered, but only some eight are commonly used. Of the over 14,000 chemical compounds tested for anti-malarial activity, only three or four have been found satisfactory. To develop one of the broad-spectrum antibiotics, a team of some 55 scientists spent two and a half years screening over 100,000 soil samples at a



cost of around $4,000,000. (Only 76 of the 100,000 soil samples contained organisms showing any antibiotic activity at all.)

So planning the research program must be a continuous, not an annual process.

(b) *Size of the Research Budget*

The principal limiting factor in the planning process is the amount of money that can be made available, not only for the day to day running expenses of the research department over an extended number of years but also for providing the laboratories and equipment that it needs to carry on its work. The first question to be dealt with, therefore, is how much should a pharmaceutical company spend on research in relation to the volume of its sales, the amount of its total assets and its earnings.

Because chemistry and medicine are so deeply absorbing, because progress in them will benefit all mankind, because of the comparatively rapid rate of technological obsolescence of pharmaceutical products, and because it is human to want to see one's business grow, the temptation to management is to spend on research every nickel that the company can scrape together that is not absolutely necessary for other purposes.

The pharmaceutical industry is, however, a business the purpose of which is to pay a return to stockholders on their investment. Thus the question really is how much of the sum that is left after paying the essential production, selling and administrative expenses and after meeting expanding capital requirements should be paid out as dividends to stockholders and how much should be spent on research.

This is a basic decision of company policy and can only be made at the highest level, i.e., by the Board of Directors. There are a number of ways in which it has been approached.

Many financial analysts, and probably some directors also, when studying this problem think in terms of how much of the sales dollar should be spent on research. It is difficult to see how this method of measuring research expenses can furnish results of practical significance, but because it is so widely used it will be considered briefly.

Not all important pharmaceutical companies publish financial statements, and of those that do, not all disclose the amounts they spend on research. The figures I have been able to assemble thus cannot purport to cover the industry. They do, however, show the research expenses of eleven widely-known pharmaceutical companies and are probably fairly representative of the industry as a whole.

Of these eleven companies, the one that spent the largest percentage of sales on research in the past five years reached the level of 10.7 per cent in one year, and the mean for all eleven was 4.8 per cent of sales. This is high compared with other branches of the chemical industry. Of seventeen chemical companies whose stocks are listed on the New York Stock Exchange, the one that spent the largest percentage

of its sales on research in any of the last five years, reached the level of 5.3 per cent, and the mean was 2.8 per cent of sales. That these figures are pretty close to the industry average is borne out by a study conducted by the Industrial Research Institute and some other organizations in 1952 showing that of the pharmaceutical companies supporting research the average expenditure amounted to 4.9 per cent of sales, whereas in the industrial chemical field the ratio of research to sales was 2.9 per cent and for companies making what were termed "miscellaneous" chemicals it was 2.4 per cent.

Thus it is probably safe to say that in terms of percentage of sales the pharmaceutical industry spends more on research than other chemical companies.

The reason that the percentage of sales spent on research does not have practical significance, at least for the purpose of planning a research program, is that the volume of a company's sales does not necessarily have anything to do with the amount of money it can make available for research purposes. The margin of gross profit varies greatly in different branches of the chemical industry and even between companies in the pharmaceutical industry whose business may be more concentrated in producing one type of product than another. For example, it is well known that the margin of profit resulting from the production of the new cortical hormones is larger than that resulting from the production of penicillin, so that with the same volume of sales the hormone manufacturer would have more to spend on research than would the penicillin manufacturer.

Let us consider, therefore, what amounts chemical, and more particularly pharmaceutical, companies spend on research out of the money they have left after meeting their production, selling and administration expenses, in other words out of their net profits before taxes, before setting aside the funds required for the essential additions to working capital and plant and before spending anything on research.

Taking the same companies considered before we find that one pharmaceutical company in one year spent 33.7 per cent of its net profits before taxes and research on research. This was the highest percentage so spent but its stockholders are not likely to com-

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Men's Preparations...

by Harry Hilfer

The demand for men's cosmetic or toilet preparations has increased tremendously from the period during which any preparation a man used was forced upon him by his wife. As a result, a fair sized segment of the cosmetic industry is devoted to preparations for use by men. Shaving creams are still the most popular of these preparations, and the introduction of the aerosol shave cream has to a great extent changed the complexion of this market—but since this field is presently in the midst of litigation because of the patent situation, this article will not touch on it but devote itself to the after-shave preparations, hair dressings, deodorants and other men's preparations.

Hair dressings have always been popular men's items and they have had a long history. Indeed, in even the most primitive civilizations, men have used fatty or oily preparations to dress their hair. The modern accepted dressings have a two-fold purpose primarily to keep the hair in place and also to enhance its appearance. The preparations now being sold cover a wide range from completely non-oily preparation to some that are all oil. Quince seed solutions, once extremely popular are not as widely sold as some

of the others, and though mineral oil is still being used as such without dilution, the more popular preparations are essentially diluted oils. The dilution may take its form as an oil dissolved in a suitable solvent or as an emulsion in which water is the diluent. The film formed after application and subsequent evaporation of the volatile portion therefore imparts enough oil to keep the hair in place and also imparts a sheen without causing the hair to appear "greasy." This latter factor seems to be an important consideration.

The first of these more modern dressings was a castor oil-alcohol solution, admirably suited as a hair dressing because of the high viscosity of the castor oil. The choice of oils at the time of the introduction of this type of dressing was limited to castor oil since it is the only one of the fixed oils which is soluble in alcohol. The castor oil-alcohol preparations enjoyed a great popularity until the advent of World War II, when allocations of alcohol for defense purposes

caused manufacturers to look in other directions. The emulsion types of lotions made their appearance as a result, and were, as they still are, tremendously popular. Here water replaced alcohol as a diluent and instead of a solution the oil was incorporated into the water as part of an emulsion. These emulsions are both water-in-oil and oil in water and contain from 15 per cent to 65 per cent of oil. There are a large number of non-ionic emulsifiers now available which enable the formulator to cover a wider range than was ever possible. The non-ionic emulsifiers particularly have been used with advantage in the preparation of these water-in-oil emulsions. Of great interest at the moment is the advent of a water-in-oil preparation in which the principal emulsifier appears to be the calcium soap of the free fatty acids in beeswax.

The oil-in-water preparations depend on the use of anionic emulsifiers mixed with non-ionic. In some cases, the emulsifiers are completely non-ionic, but these are in the minority. The methods of formulation are many and complex and must therefore be the subject of another paper, but the raw materials used should be referred to briefly. They are mostly mineral oils and other hydrocarbons and to a certain extent oils of the sesame type. Synthetic lubricants of low viscosity such as isopropyl myristate and isopropyl palmitate have also come into the picture and are in fairly good usage.

The presence of the emulsifiers in the hair preparations serve to allow easy spreading of the dressing through the hair. If the hair is moist when employed, as it often is, the ease of distribution is enhanced since the presence of the emulsifiers will keep the oils from precipitating at the original source of application, making distribution difficult. It therefore becomes easier to apply the oil from such a medium than it would be to apply, let us say, a straight mineral oil. Theoretically, at least, we may expect a better distribution of the same amount of oil from an emulsion rather than from use of the oil without dilution. As a consequence, the effect should be better with an emulsion because of the better distribution. To a certain extent, this argument would also apply to an alcoholic solution of castor oil though the difference would not be as great.

One of the interesting synthetic materials that has come to the forefront is the introduction and use of a series of polyalkylene glycols, which may be synthesized so that they are water soluble and insoluble, but soluble in alcohol. It therefore becomes possible to use some of them in a hydroalcoholic solution which may more easily be distributed through damp hair. Preparations of this type are increasing in popularity and are rapidly becoming more important.

After-shave preparations are also in good demand. Of course, the all important factor here is the perfume that is employed. As this choice is such a highly subjective factor, we will confine our discussion to the other factors inherent in after-shave lotions. They are supposed to produce a feeling of general well-being in the face. This small sentence covers a broad area, and I will attempt to separate the different factors this involves. My own conception would be that they should alleviate the irritating and abrasive effects of the razor; leave the face feeling smooth and thirdly prevent any possible infections due to possible cuts or nicks as a result of shaving.

The easiest method of producing these factors is the use of about 50 per cent of alcohol, which through evaporation produces a cooling effect and thus reduces the smarting caused by abrasions. It is also common practice to include in the formula a small amount of a humectant such as glycerin in order to leave on the face a thin film to act as a lubricant. Many preparations also have included a small amount of bacteriostatic agent which is designed to prevent any infection and by its presence further promote the healing of these abrasions. Greater stress is now being placed on the after-shave film than there was formerly. This is evidenced by the appearance on the market recently of an after-shave emulsion to compete with the more familiar types of hydro-alcoholic preparations. This is an interesting departure since it is possible to include in the emulsion a large number of materials which would not be compatible with a 50-60 per

(Continued on page 834)

A.D.M.A. Meeting

DR. E. H. VOLWILER, President

The public relations program for the "health team" in this country was one of the major subjects before the American Drug Manufacturers Association at its annual meeting in White Sulphur Springs, W. Va., last month. Told by President J. H. Fitzgerald Dunning that the outstanding lesson to be learned from Salk vaccine fiasco of last year is that the health team must unite to "convince the public and the public's elected and appointed officials that we are more than merchants."

Dr. Dunning pleaded for action by the membership as did George F. Smith, president of Johnson & Johnson, and chairman of the ADMA Public Relations Committee. A public relations program is necessary, according to Mr. Smith, for the reason that public misunderstanding of the place of the health team in the tremendous advances in better health made over the past fifty years keeps growing "relentlessly and seriously." Except for "sparodic and isolated efforts," said Mr. Smith, the entire health team has been "taking it on the chin without defense or counterattack" from critics. "We are on the threshold," he said, "of changing a dangerous and threatening situation to one that can raise the prestige of the entire health team in the all-important sphere of public opinion.

The public relations committee has decided against the use of "advertising as such in view of the "fantastic sums of money" that would be involved, said Mr. Smith. The major media, said Mr. Smith, are interested in authentic, interesting and news worthy articles about health and scientific progress which they will run without cost. In addition to supplying such material, the public relations program will include the preparation of television films, leaflets for druggists to wrap with prescriptions, fact books for pharmacists and others on the health team, speakers' kits, and a fact book for editors.

The membership voted the proposal to pledge $50,000 a year for three years to the public relations program. This amount, and a similar amount which was voted by the American Pharmaceutical Manufacturers' Association at its annual meeting in April, replaces the $100,000 a year which was previously voted by the members of the executive committee of the ADMA personally, to get the public relations program started.

Warning that the Federal government shows signs of getting "deeper and deeper into the drug business," at a time when industry-business relations were never better, was sounded by Dr. Karl Bambach, executive vice-president of the association. Said Dr. Bambach: "The government first began to take over an important operating function of the drug business with the certification of antibiotics. The Food and Drug Administration now runs the quality control laboratory for every company manufacturing a certifiable anti-

biotic or dosage form; the laboratories of the manufacturers are only advisory to the official control laboratory in Washington. The National Institutes of Health is becoming more active in the clinical evaluation of new drugs, and the actual development of drug products. Furthermore, some government officials apparently believe that the Food and Drugs Administration should confirm the clinical evaluation of new drugs carried out by manufacturers, but responsible officials of the agency itself do not, to my knowledge, advocate this course.

"Many FDA decisions on chemicals and drugs are now based primarily upon tests conducted by its own pharmacological laboratories. Instead of relying on the tests done by manufacturers, and requesting additional tests if necessary, the pharmacology division of the Food and Drug Administration often conducts its own pharmacological work. This puts the regulatory agency in the undesirable position of sitting as judge of its own scientific work. I am not suggesting, however, that the FDA abandon its technical investigations in this field.

"The problem is really one of extent and emphasis, and the proper balance is a delicate one to maintain. The main emphasis should not be upon evaluation of new drug components, but upon regulatory problems connected with products already on the market.

"The pharmacology laboratories of the Food and Drug Administration are also conducting, on a large scale, toxicity work-ups of many new chemicals being screened by others for possible anti-cancer activity. It is not research work in any sense of the word, for it is ordinary testing of the most routine kind. This is being done on a fee basis, quite like a typical commercial laboratory. It is not related to refulatory work, or to the traditional tests of materials purchased by the government. It is a new departure in the assumption of business functions by a regulatory agency.

DR. J. H. FITZGERALD DUNNING, Retiring President

"Perhaps the trend I have described is inevitable. The aim to develop new curative measures is certainly laudable. No one can oppose constructive attempts to conquer the dread diseases which still remain unsolved. However, the federal government can, by its very size, occupy the field so completely that industry and the universities may soon find themselves relegated to the background.

"In time they may be forced out of medical research entirely. Those interested in these policy problems should ask themselves if medical progress is made more rapidly with a system of practically exclusive government research, or instead with a healthy combination of industry, academic, and government research.

"Perhaps the most alarming excursion of government in business occurred only recently when the legal authorities of the Food and Drug Administration decided that the present law provided for restitution of money paid by customers to purchase adulterated or misbranded drugs. If the restitution doctrine is upheld by the courts, now being tried in the Parksinson case, the government will be able to dictate where the money spent for certain drugs will go.

"Thus the trend for the government to enter the drug business has taken these steps:

(1) Running the quality control laboratory for certain drugs.

(2) Carrying out its own tests, then sitting as judge of its own work.

(3) Conducting the pharmacological tests on a commercial laboratory basis.

(4) Conducting clinical evaluation of new drugs, and developing new drugs.

(5) Requiring that customers must be refunded the money paid for certain drugs.

"This trend should be carefully considered by everyone interested in the future of the drug industry."

"Minimum requirements for all biological products" can be expected to be drawn up by the government, warned A.D.M.A. general counsel John K. Worley, in pointing out that "there is ever present in Congress and some government bureaus a latent desire for more, and in my opinion, unnecessary regulation in our industry." Mr. Worley also expressed the belief that the government will engage in "more fields of research and scientific activity heretofore considered the responsibility of industry.

"For example," said Mr. Worley, "we should anticipate expanded pharmacological and critical testing facilities in government agencies. This latter threat, I suggest, should have our earnest attention.

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SHERWOOD E. SILLIMAN, President

Proprietary Association Meeting

The proprietary drug industry has reached the billion-dollar business milestone but, more significantly, has won in its 75 years history the "complete respect and confidence of the federal government through its contributions to public health," retiring president Stanley I. Clark, vice-president of Sterling Drug, told the 75th annual meeting of the Proprietary Association last month. In recent years, the partnership of government regulatory agencies and proprietary manufacturers has attained its most harmonious peak, said Mr. Clark, noting that this has been accomplished as the result of the basic soundness of the Pure Food and Drugs Act of 1906 and "its enlightened administration by public officials. Equally important has been the stimulus to technological competition and progress; for no manufacturer of stature could afford to permit his competitors to outstrip him in manufacturing excellence and in scientific advance."

Discussing the future, Mr. Clark said:

"There are certain intra-industry relationships which deserve re-examination. The individual companies in the drug industry are each contributing to a number of cooperative activities—in research, in legislation, in public relations, in education, and in other areas. This is not the place to evaluate these activities or to suggest new cooperative tasks looking to the attainment of definable and desirable objectives. It does occur to me, however, that the time is approaching, if it is not already upon us, when a full study of all areas of cooperation, as well as other areas where cooperation might be indicated, will have to be made."

Claiming that the proprietary drug industry has not held its share of total consumer purchases, drop-

ping from 0.90 per cent in 1939 to 0.68 per cent in 1955. Arno H. Johnson, director of research of J. Walter Thompson Company, said:

"To keep up with our expanding productive ability in America we must increase our total *consumption* of goods and services by 50 per cent within the next ten years. This means adding $130 billion to the level of sales to consumers—from the present level of $260 billion to the level of $390 billion of personal consumption expenditures needed to support the $570 billion total production ability we shall have by 1966.

"Drug preparations (proprietary) share of the consumer dollar was one-third greater in pre-war 1939 than in 1955. In contrast with this drop, the share of the consumer dollar represented by food increased from 23.3 per cent in 1939 to 27.4 per cent in 1955. Consumers spent for food in 1955 about $10 billion more than was needed to maintain the prewar relationship of 23.3 per cent of total consumption expenditures.

"The changes that have taken place since prewar indicate a market potential far greater than present sales for proprietary drugs and preparations—greater even than was indicated by the relationship to total personal consumption. The shift upward in income

STANLEY I. CLARK, Retiring President

distribution of families between 1941 and 1956 would alone expand the present market potential for these products to a level 65 per cent above the actual sales in 1955. That magnitude of expanded potential would come about if families who have moved up in income class would take on the prewar drug preparations consumption habits and desires of the income group into which they have moved. But greater selling effort obviously is needed to translate these increased potentials into increased sales. And even greater attention to the consumer is needed if this industry is to grow along with the expanded market opportunities of the next decade."

Mr. Johnson gave actual consumer expenditures for proprietary medicines and sundries in 1955 as $1.73 million, against $1.63 million in 1954, and $725 million in 1941. For toilet articles and preparations he gave $1.54 million in 1955, $1.47 million in 1954, and $607 million in 1941.

A Century of Progress of the proprietary medicine business was discussed by three speakers. Retiring executive vice-president Dr. Frederick J. Cullen discussed the first twenty-five years from the first days of the Proprietary Association in 1881 to the passage of the Food and Drugs Act in 1906. General Counsel James F. Hoge discussed the Middle Fifty Years from 1906 to 1956, and Raymond M. Rice, M.D., executive director, medical research, Lilly Research Laboratories, discussed the Next Twenty-five Years.

The population picture in this country was pointed out by Mr. Hoge who said:

"In 1906 our country's population was about 85 million. Now it is approximately 167 million and growing at the rate of about 220,000 per month. The government estimates that by 1975 the population will be 220 million. As for the world at large, its population today (2,652,000,000 in 1954) is equal to one-fifth of all the people who have ever lived on earth. Every day its population increases about 100,000.

"The enlargement of the business in pharmaceutical specialties, or 'ethicals,' is particularly noteworthy . . . In 1904 the value, at manufacturers' level, of 'patent and proprietary' medicines was $74,520,765 as against $31,782,250 for pharmaceuticals. In 1954 the 'ethicals' were $1,014,000,000 against $546,000,000 for proprietaries. The positions have been transposed—almost exactly . . . In 1906 the physician relied upon medicines dispensed by himself or compounded by pharmacists according to his prescriptions. Today the major part of his medication is ready-made, packaged by the manufacturer and available to him, or at his direction, in complete packaged units or in broken-package lots under the pharmacist's label. . . .

"While not as spectacular, the growth in proprietary sales has been steady and substantial, tending to follow increases in population and consumer advertising and merchandising. A development worthy of special mention is the interest of proprietary manufacturers in research. Some estimates place the ratio of research costs to sales at one-third to one-half of the amount spent on ethicals. Another interesting development has been the investment by proprietary companies in pharmaceutical manufacturing.

"All this has been closely related to the operation of the 1938 statute in separating packaged drugs into two classes—those limited to prescription dispensing and those labeled for over-the-counter sale. It was not until the working of the new statute had progressed a good distance that it was realized that this law was not to be detoured around old-time ways of distribution in reaching its objectives of public safety, convenience and benefit.

(Continued on page 844)

T. G. A. Meeting

PIERRE HARANG, T.G.A. President

The 21st annual meeting of the Toilet Goods Association, held at the Waldorf-Astoria, New York, May 15 to 17, set still a new record for attendance. Retiring president John A. Ewald, president of Avon Products, nc., pointed out that the record toilet goods ales of $1,192,000,000 in 1955, indicated an annual household expenditure of about $25 which is almost 2½ times the expenditure per family in 1934. This growth has been brought about because the members of the toilet goods industry have developed better products and have engendered on the part of the consumer a greater acceptance of those products, said Mr. Ewald.

Mr. Ewald also pointed out that of equal importance as this growth, is the fact that the industry have achieved new maturity. "The industry is large," he said, "but more important than size is the fact that ti is accepted as a stable and substantial member of the business world. The realization has come to the public and to the financial world that the toilet goods industry is a sound business and will continue to grow."

"Fashion is still a driving factor in our industry," said Mr. Ewald. "An important development in this field is the awareness of the members of our industry that we can have a part in the development of fashion through the utilization of color, fragrance, and good grooming.

(Continued on page 846)

COSMETIC CHEMISTS MEETING

The Annual Spring Meeting of the Society of Cosmetic Chemists, held at the Hotel Biltmore May 18, 1956, was attended by more than 450 members and non-members of the Society. At the luncheon, presided over by Sabbat J. Strianse, president-elect, a scroll of honorary membership was presented to Commissioner George P. Larrick of the Food & Drug Administration, and the Special Award was presented to Dr. Walter B. Shelley.

S. L. Mayham of the Toilet Goods Association introduced the Commisioner; the scroll of honorary membership, the eighth since the founding of the Society in 1945, was presented to Commissioner Larrick by George P. Kolar, president of the Society.

The Special Award of $1,000 is awarded annually to the author whose papers are considered most important in the advancement of cosmetic science. Dr. Frederick D. Weidan, Emeritus Professor of Dermatology at the Graduate School of Medicine of the University of Pennsylvania described the achievements of the award winner and the award was presented by Mr. Kolar. Dr. Shelley, Associate Professor of Dermatology at the University of Pennsylvania and chief of the Dermatology Clinic is an expert on the physiology of the skin and the award was made in recognition of his contributions to the knowledge of sweat glands and sweating.

The technical papers were presented at sessions before and after the luncheon and were very well attended.

E. Sagarin of Standard Aromatics, Inc. opened the proceedings with his paper "The Behavior of Perfume

(Continued on page 849)

New Product Development*

by Allan J. Greene

DIRECTOR OF COMMERCIAL DEVELOPMENT, CHAS. PFIZER & CO., INC., BROOKLYN, NEW YORK

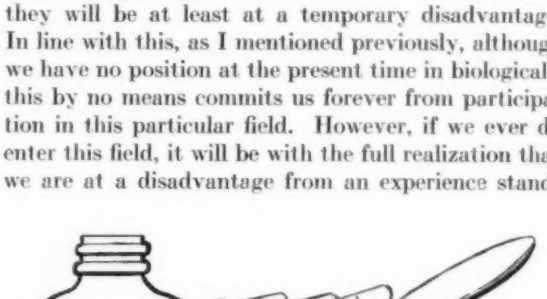
The development of new products in the pharmaceutical industry is certainly one of the most important activities as far as future growth is concerned. In this respect, in all companies, this function attracts the attention and occupies a good proportion of the time of top managements.

The basic approach to this problem of new products, must be laid down by basic policy dictated to top management by a number of considerations.

Most important, is the experience of the particular company involved. This experience in Research, Production and Sales must be considered very carefully in comparison to other companies with whom you will be in direct competition. For instance, in our company, we have a strong background in synthesizing chemicals, vitamins and the many drugs which we now have on the market. In addition, we have a very comprehensive background in the field of fermentation, not only of industrial chemicals, but also of antibiotics. On the other hand, we feel that we are quite inexperienced in the research, development and production of biologicals. For instance, when the Salk vaccine was first proposed and our company was approached as to our interest, we had of necessity, to decline. With no background in biologicals we felt that we could not contribute significantly to the development and production of this particular product. It is certainly management's responsibility to develop a policy that will encourage research and the development of new products in the field in which we have the most experience, and approach with very great caution those fields in which we have little or no experience.

This approach to a basic policy for any particular company may seem very obvious, but if we were to study the history of various projects conducted by many companies, it would become quite evident that the policy is not quite as obvious as it might seem. All of us, I am sure, have seen companies attempt to develop new products which simply did not fit into their line, or enter into a field where they had no experience, or one which they had no background.

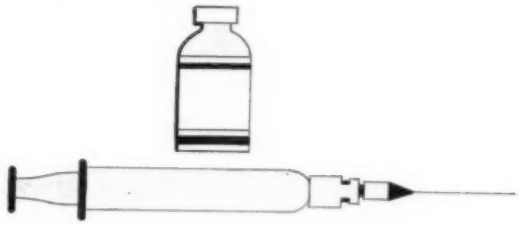
This is not to imply that a company should not explore new products outside of their particular field. I do suggest, however, that these be approached with a clear and realistic recognition of the weaknesses in such an approach, in addition to the realization that they will be at least at a temporary disadvantage. In line with this, as I mentioned previously, although we have no position at the present time in biologicals, this by no means commits us forever from participation in this particular field. However, if we ever do enter this field, it will be with the full realization that we are at a disadvantage from an experience standpoint and also with the knowledge that much basic research will have to be done on techniques, procedures, etc. before we can even be on a par with the present leaders in this field.



After the basic policy decisions have been made as to the fields of interest on new products, it is very important then to narrow the field to the type of market in which your company would be interested. The type of market is a purely relative term, as the interest of a particular company will be determined by the considerations which I have already covered. On the one hand, a company with, let's say 500 detailmen might only be satisfied with a product that could command a sale of $1,000,000 per year; while another

*Condensation of a talk delivered before the West Coast Section of the APMA, February 14, 1956.

company with no detailmen and perhaps a different type of distribution, might be content with $100,000 per year. It is important to emphasize the fact that the size and type of market, while determining a company's interest, should only be considered on an individual basis.



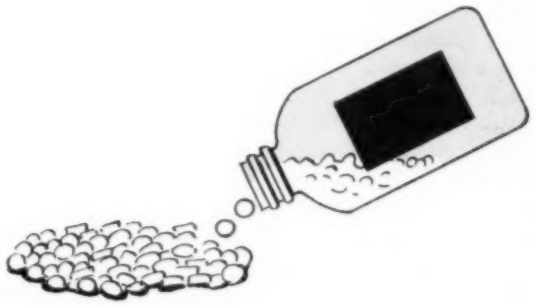
Next, there should be an intensive study made of the market within the defined area. The present products and their advantages and disadvantages from an efficiency standpoint should be evaluated. As a corollary of this, of course, it must be determined what the possible market might be if a better product were developed. This calls for a certain amount of guess work, but with the proper facts and figures at hand, the guessing can be cut to a minimum.

Another important fact which must be determined, usually by the Market Research group, is the market as characterized by a particular method of distribution. For instance, certain products are utilized almost wholly in hospitals, some principally on prescriptions, and others by dispensing doctors. Obviously, any product under consideration should be studied as to the method of distribution so that the costs involved with selling can be determined fairly accurately. Some projects, I am sure, have been failures because this phase of the operation was not analyzed in more detail.

Once the policy decision has been made on the fields of interest and the Market Research Department has carried out its studies, the next move is to initiate research aimed at getting products in which we are interested. At Pfizer the Market Research reports are forwarded to our Director of Research. He studies the various fields for promising projects and comes up with recommendations on suitable research programs for accomplishing the objectives. His recommendations will include the potential market as determined by the Market Research Department, together with the estimated costs of this research. In addition to this, he will give some opinion on the chances of success in obtaining a product superior to any on the market. When these recommendations have been received by top management, they are reviewed very carefully, and approval is given to proceed on those projects which appear most attractive to them on the basis of all the information in their possession.

The amount spent on each research project is reviewed quarterly together with a progress report on the project to date. The recommendation of the Research Director as to the feasibility of continuing the project and his opinion at that particular time on the probable success of the project is also submitted.

Research in the pharmaceutical industry, aside from formulation of dosage forms, consists principally of screening programs. These screening programs can sometime be carried out in laboratory glassware but most times must be carried out in animals. The types of compounds that are used in these screening programs can be synthetic organic compounds, compounds produced by fermentation, or compounds extracted from natural sources.



When an active compound is discovered in one of these screening programs, this immediately triggers off a more complicated screening arrangement. In the case of pharmacological screening, any activity must be further screened in more animals and in different species in order to determine whether the activity is real and reproducible. In addition to this, when activity is established, we must determine the toxicity of the drug. This can be very time consuming and costly, for in the case of a drug that is taken chronically, the toxicity work must extend over one or two years in several species of animals. In order to be certain that this toxicity and pharmacology work is dependable, we must also establish standards of quality for the drug. When the standards are set up by the Analytical Department, and animal work has been carried out, and activity is certain, and when the lack of toxicity has been proven, we can then proceed with clinical work. This involves using the drug in humans against actual diseases or symptoms. These clinical programs can extend over many months and sometimes can extend for years. The results of this clinical work are also used to inform doctors of the efficacy of the drug, for usually investigators publish results.

(*Continued on page 851*)

Rutgers Pharmaceutical Conference

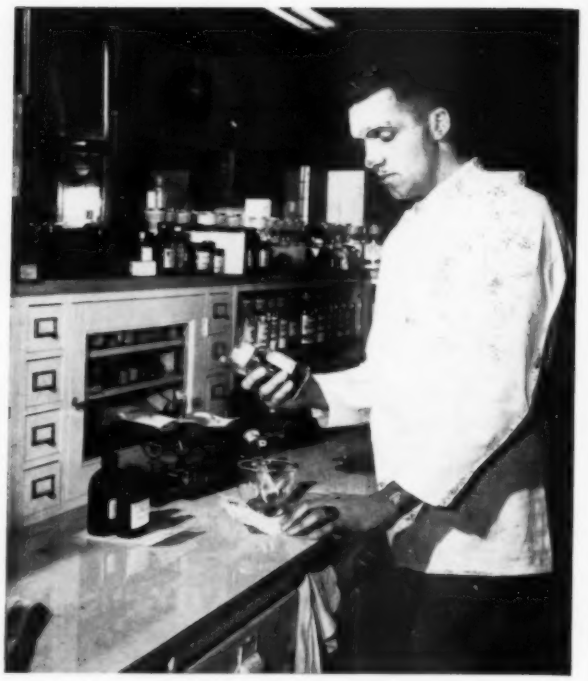
Prescriptions by physicians in 1955 increased eight per cent over those of 1954, Dr. Austen Smith, Editor of the Journal of the American Medical Association, told the Rutgers Pharmaceutical Conference last month. And this occurred in a year when the general population as well as the physician population, rose less than two per cent. The average doctor wrote 94 more prescriptions in 1955 as compared with 1954, a year which itself was responsible for an increase of six prescriptions per physician over 1953.

In 1955, said Dr. Smith, the number of dollars spent on prescriptions was $1,290,409,000; the number of prescriptions was 482,190,000; the number of refills was 203,904,000; the number of prescriptions per family was 9.4; and the amount of money spent by the average family for prescriptions was $25.03.

"When we consider the number of new products being introduced each year," said Dr. Smith, "the advertising spent on them, and the yearly increases in population, we can begin to picture the enormity of the drug business. And when we consider the number of hospitals in existence, the increasing number of doctors and our expanding economy we can thrill to the challenges ahead. Paul de Haen claims there were 403 new pharmaceutical items introduced in 1955 as compared with 380 in 1954. A retail drug magazine reports a sales increase in 1955 over 1954 for anti-infectives of $41,398,000; for anti-arthritis remedies $25,944,000; for sedatives and hypnotics $20,069,000; for cardiovascular agents, $32,997,000. . . .

"The future of medicine depends on the physician as a practitioner, researcher, administrator or public health official and also as a citizen interested in his community, his state, and his country, in politics, and in law enforcement. It depends on pharmacists, who have such a close affiliation with physicians and the laity; on nurses, who are the physicians' right hand allies in caring for the sick; on the press, for its reporting of news, its informing the public, its molding of opinion; on the public health official for his yeoman work in preventive medicine; and on others whose work is known to and respected by all.

Commenting on our free interchange of information and our freedom in things medical, Dr. Smith points out conditions in some other countries:



LAMBERT PHOTO

"In Sweden there is practically no such thing as a family doctor; in Norway the number of drugs, pharmacies, and even brands of a drug are limited; in England all drugs have been divided by a special committee into five groups and the doctors are urged not to use the last group (of course, the next step could be to actually forbid use of some of the drugs, and even entrance by the government into drug manufacturing); in Chile all doctors are state employees; and in Japan—well, here is a wonderful example of what can happen: Sixty million people, or two-thirds of the population, are covered by social security insurance plans. The plan was begun twenty-seven years ago and was intended as a protection for the health of factory workers. Now it covers everyone from seamen to government personnel. The Japanese medical society's voice has been largely ignored. The laws in this twenty-seven year period have been revised twenty-five times, always for economy and for the convenience of the government rather than for patient and physician. Doctors are restricted to medicines in an approved list; they cannot use new drugs until a security committee has given approval which may take several months or a year. Those in charge of medical affairs are various ministers (e.g., agriculture, labor) and as a result the doctors do not have one policy to follow, but several. The patient must go to a specified hospital, not to one of his choice. There are fixed fees for doctors, and those fresh out of medical school receive the same as those with years of experience."

Looking into the crystal ball to predict conditions in pharmacy in 1966, Henry S. McNeil, president of McNeil Laboratories, outlined these potential developments and their effects: *(Continued on page 855)*

Vanishing Customer Loyalty

by Frazer V. Sinclair

There is increasing agreement among sales and advertising men that customer loyalty is not what it used to be. Quite a few surveys and panels agree with that conclusion.

This is the age of gimmicks, gadgets, promotions, premiums and trading stamps. It is also the age of invention. Every day we see evidence that modern America has adopted with zest the slogan, "Off with the old, on with the new." It may even be, in this wonderful era, that we must deliberately sacrifice the old fashioned kind of customer loyalty in order to keep moving.

It isn't necessary to strain our memory very far to recall a time when customer loyalty was a powerful bulwark sheltering the established brand manufacturer. To gain a market position, as a newcomer, with retailers and with consumers meant years of hard work and superior selling and advertising. The relative stability of the tooth paste market, and many other brand histories of that time are characteristics of those tranquil days.

It is probable that business men will have to learn how to live with this new customer attitude. For many it may be the most troublesome and hazardous problem in their business.

Influence on Retail Drug Trade

A mental inclination favoring obsolescence by the public, which is so basic in customer attitude today, is best shown in a recent Nielson survey in the retail drug trade. This survey showed that the percentage of products newly introduced during the year to the retail druggist has sharply increased each year for the last five years until now newly introduced products, make up over 30 per cent of the druggist's annual business.

Customer loyalty is everybody's problem in business today. Very few retailers have that old fashioned kind of clientele which does not have to be earned every day and with every sale. In fact the retailer himself, in his present purchasing policy, has very little veneration for the vender that is based upon past performance.

If it is true that customer loyalty is a diminishing part of American business, as everyday observation would seem to indicate, then certainly the interesting question is: do the obvious advantages of this change in American buying psychology outweigh a number of obvious disadvantages? In diminishing customer loyalty are we freeing American business from outmoded traditions, too fixed habits and what we might call buyer's lethargy? Or are we piling up a mess of woes for business simply because the economy cannot support an exaggerated craving for something new that in some trades is becoming almost pathological.

It must be admitted that the dynamic growth of this past decade, spurred by eager consumer spending,

the AEROSOL VALVE for Your Product by PRECISION

The picture tells a story . . . the story of over-whelming popularity, tremendous growth and continued reliance on a quality product . . . PRECISION VALVE.

The use of over 300,000,000 time-tested valves by hundreds of completely satisified customers throughout the world, is your assurance that PRECISION has the answer to your aerosol program regardless of product or container.

We invite your inquiry to enable our staff of aerosol valve technicians to work cooperatively in satisfying your valve requirements.

PRECISION

Precision Valve Corporation

700 NEPPERHAN AVENUE • YONKERS 3, NEW YORK

could not have been so vigorous or so lush without this change in consumer buying psychology. Consumer wants and consumer ability to spend have expanded enormously during this period. But consumer wants have been actively and continuously stimulated by the planned obsolescence promoted by American industry.

Again, it must be admitted that this new buyer's attitude has had an enormous influence on research, invention and creative ideas. There is no need to labor the point that the American consumer shows an inquisitive eagerness for anything new and a quick responsiveness to try anything new. The result of this stimulus can be seen in every branch of industry—in product development, in packaging, in equipment and promotions. In fact every possible branch of industry toward which the creative mind could be directed has been powerfully influenced and exhilarated by this new customer attitude.

Negative Aspects

These positive values, while clearly evident in our booming economy, are not the entire story in this change in customer loyalty. There are negative factors, just as clearly recognized, which put an increasingly uneasy question mark to the thinking of many business men.

This fading customer loyalty, accompanied by an enthusiastic eagerness to try anything new, does give energy and zest to creative thinking in business. But it also imposes an increasing hazard to many businesses and it also imposes heavy handicaps in increased costs.

It has been a common experience in the ethical pharmaceutical branch of the industry to find that from fifty to sixty per cent of sales in any one year are in products not over ten years old. Recently the head of a large soap company was quoted as saying that eighty per cent of the products now sold by his company were at the time less than five years old in their present form. In the cosmetic industry the pace of product deterioration is even swifter. If we consider the package as an essential element of the product, which is nearly always true for cosmetics, it is probable that the life span of over 80 per cent of all cosmetics, without some basic change, is less than three years.

With hazards of this kind—that is, the necessity for continual change and the equal necessity for being right so often—it is easy to see why business is putting more and more money into research. But it is sometimes puzzling that business so universally has the courage for continued capital investment in factory and equipment.

The increased cost to the manufacturer from a decline in customer loyalty is difficult to appraise. Yet nothing is more certain today in marketing many packaged products than that there is an increased cost of advertising, per dollar of retail sales.

In many packaged products such as breakfast food, cake mixes, lipsticks and shampoos, each sale is literally a new sale. The repeat customer, at the retail counter, is becoming more and more the resold customer.

Progressive Obsolescence

That this puts a heavy cost burden on advertising none can deny. Perhaps the burden may soon prove too heavy. It is all very well to spend two or three or more million dollars in advertising on one product like a lipstick, when that product has the sales margin provided by a retail price of a dollar or more. It would be quite different if the lipstick price ratio, that is the relative volume of sales of the dollar or more lipstick and the less than twenty-five cent lipstick, were the same today as in the pre-war era.

The present day potency of the gimmick, coupled with customer eagerness for something new is giving rise to a new way of doing business. This might be called the process of progressive obsolescence. This new American business way is being stimulated by another American business phenomenon of today, that is self competition as practiced by the makers of tooth paste, detergents, cooking oils, cigarettes, automobiles and now lipsticks, hand creams, shampoos and deodorants.

Progressive obsolescence means progressing market by market or layer by layer to cover and exhaust in a limited period the entire American market. It means also a progressive movement throughout the retail pipe lines. An essential ingredient of progressive obsolescence is an effective gimmick or gadget for advertising to tease the curiosity of the ever ready American customer. Progressive obsolescence contemplates a product business life of three to five or even eight years. It discounts nearly completely the repeat sale. As an example, let's take a lipstick with a real new gimmick in advertising or packaging, application or a cosmetic quality. Let's say that this gimmick will rarely produce a repeat sale, but that it is good enough to make each lipstick user buy the lipstick once.

For a five-year program, there is a consumer market of fifty-five million women. That's a volume, over five years of, let's say, sixty million dollars, at retail prices. There are over one hundred thousand retail outlets selling lipsticks. That's an average per year, over the five year period, of twelve million dollars a year in retail sales with the opening of new retail pipe lines of twenty thousand new retail accounts each year. Admitted the gimmick must be something special, the product must be priced to produce at least a million dollars a year for advertising, and the marketing procedure must be cleverly organized to expand into new markets each year until the entire mass market is depleted. More than one market operator has recently pursued this path. With several million dollars net, for the few years cycle, such an operator can well hold his hands and say "Look Ma, no repeat sales." *(Continued on page 858)*

PLANNING TO al LURE A WOMAN

She's a woman with appeal . . . concerned with keeping and enhancing that appeal. To her, as to every woman, cosmetics open up a world of glamour and enchantment. The brand that conveys this aura of mystery, even while on a shelf or counter, has a powerful advantage over its competitors.

Packaging is the "lure" that attracts and enhances at the point-of-sale. No wonder, when leading firms choose their packaging source, you can be sure that their decision is the result of careful study, based on a demand for creative thinking, quality of product and service.

This ability to combine creative packaging with manufacturing know-how has made J. E. Plastics the world's largest manufacturer of acetate containers. If you have a problem calling for creative packaging . . . for either a new product or for a special promotion of your regular line . . . it will pay you to write or call J. E. Plastics.

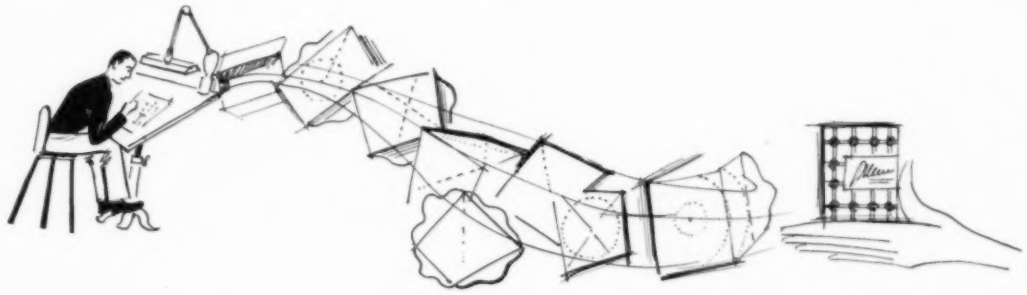
J. E. PLASTICS MFG. CORP.
Development Division
555 West 23rd Street • New York 11, N. Y.

THE PACKAGE . . .

*From the idea to the production line**

by Albert R. Jasuta

UNIT CHIEF, PACKAGE DEVELOPMENT UNIT, BRISTOL-MYERS COMPANY



The toiletries business is a fast moving one. New products, promotions, deals, gadgets and gimmicks are blasting away at the retail counters constantly. Intimately tied into this fast pace is the package: that item which carries and contains, preserves and dispenses the product, and delivers its sales message.

This paper will discuss the package—inside, intermediate, and outside—and how it moves from the idea state to that point where it is handled smoothly on a production and finishing line. Basic considerations underlying this transition are:

1. First there must be a statement of the problem or of the goal sought. 2. Once knowing the problem or goal, possible solutions and methods of attack are proposed. 3. Next come the evaluation, testing and preliminary costing of the proposed solutions. 4. The development of sources of supply is usually concurrent with No. 3, although in some instances it may precede or follow it. 5. Then follows the costing—both from materials and methods viewpoint. 6. Next comes the rating of potential packages, followed by a choice. 7. Lastly, the preparation of specifications to the mutual satisfaction of both supplier and user.

Allow me to draw on my company's operations to further this topic. At Bristol-Myers we feel it is necessary for diverse groups to "get into the act" on the development and choice of containers. The key to success, we think, is having the "act" orderly, organized, and efficient. To carry out our container program, the company operates through a dual team: a) packaging committee, b) deal packages task group.

Packaging Committee

The packaging committee is composed of key representatives of production, advertising, merchandising, purchasing and research development groups. The scope of the committee includes:

Overseeing the company's packaging function; setting up projects and carrying them out through the medium of subcommittees; acting as a clearing house for new ideas; formulating policy on packaging.

Meetings are held approximately every two weeks, and minutes are broadly distributed within the company to parties concerned. Ideas and problems are funneled to the packaging committee, which makes a revival. If the item is significant, the scope is defined and a project started.

The project may concern development of containers for new products, or it may involve cost cutting and/or upgrading containers for old standby products, or it may concern the evaluation of new materials or concepts in packaging. The scope of a project varies; some items are completed within two weeks, but most require a month or two to about a year. Involved may be an intensive effort in both physical and chemical laboratory testing, machine design, and market research.

In its job of overseeing the company's packaging function, the packaging committee audits and reviews containers from aesthetic, functional, cost, and production standpoints. For example: in a review it was found that our Vitalis bottle needed a facelifting. This led to a project with the subcommittee consisting of members of production, purchasing, sales and development. To the uninitiated, the choice of a new design bottle would involve no difficulty. These however were some of the facets of the problem. The new bottle was to have a different shape but it was still to contain the same amount of product. It was to be packed in the same carton and be adaptable to the same filling and packaging machines. It had to be sound in construction and good in appearance. Its basic design was to be applicable to the four different sizes carried. Lastly, it was to be produced with acceptable uniformity by three different suppliers.

Sometimes the project is less involved. For example,

*Presented before Toilet Goods Association, May 16, in New York.

We can supply fine quality handmade glass containers made to private mold specifications or in a stock design such as the one illustrated. They can be furnished plain or with fired-on ceramic labels.

CARR-LOWREY GLASS CO.

Designers and manufacturers of fine glass containers

Factory and Main Office: BALTIMORE 3, MD. • New York Office: 415 MADISON AVE • Chicago Office: 1572 MERCHANDISE MART

the product manager of Trushay wanted something on the Trushay bottle that could be sent in by the consumer for premiums, etc.—a "mail this in" sort of device. After a combing over by the production department and package laboratory, a number of samples was prepared representing what could do the job that could be run on the line. The samples included, among other things, collars, pressure sensitive "premium" labels, printed shrink type cellulose bands, printed tapes, and tags. The idea most acceptable to both sales and production departments turned out to be the brainchild of the production subcommitteeman which permitted the use of the present label with only a revised format and a modified gluing. The adjustment in the gluing operation placed adhesive only on the lower two-thirds of the label, leaving the top third for a "tear off at dotted line" removal. A quick test run by the package laboratory showed the idea to be sound, with no difficulties with "curling" or delamination.

In its function as the clearinghouse, the packaging committee's purview includes items from both within the company as well as from outside sources such as suppliers, consultants and independent inventors.

A study on the possible applications of low pressure polyethylenes in Bristol-Myers' packaging was initiated at the suggestion of the package laboratory. The basis: preliminary tests by the laboratory plus advance technical information from suppliers.

Another example: the purchasing department might be approached by an independent inventor of a novel dispensing type closure. If of possible merit, the idea would be referred to the committee. Here it would be discussed and if endorsed for study, would be referred to a subcommittee.

Deal Packages Task Group

The deal packages task group operates under policy set by the packaging committee. It is charged with the investigation and development of containers and packaging for deals and special promotions. Its operations are more informal than the packaging committees to permit fast and flexible handling of its projects. There are no regularly scheduled meetings; instead there is a hand in glove liaison between a coordinator at the New York executive office (in the purchasing department) and one at our main plant at Hillside (in the package laboratory). Departments represented on the task group are merchandising, production, purchasing and research development.

For deal and promotion packaging, generally the basic unit package is maintained in its standard construction. This obviates the necessity of chemical and compatibility testing.

The task group goes into action with the merchandising department's issuance of an investigation request. The investigation request constitutes the statements of the goals sought, and in addition outlines the quantities involved and gives the timetable.

FIGURE 1

INVESTIGATION NO. S-14 (AMMENS-DUCK COMB.)

DEAL MERCHANDISE: Consisting of one Ammens 5½ ounce (59c) size combined with a xxc (retail value) foam plastic duck (baby bath toy) to sell for F.T.M. of xxc (Duck Free Introductory Gift To Attract Mothers and Increase "Baby" Use of Ammens).
UNIT PACKAGE: Display boat offering side-by-side arrangement. Duck to be held in normal horizontal position for best display value. (Sketch omitted because of advanced status of construction.)
INTERMEDIATE PACKAGE: None.
OUTSIDE PACKAGE: Ordinary double-slotted carton (kraft finish).
PACKING OF OUTSIDE PACKAGE: To contain one (1) dozen deal combination units **AND** one (1) dozen Ammens 5½ ounce (open stock).
This split packing arrangement is necessary to provide amortization of duck cost at a smaller (per Ammens unit) cost than would be the case if combination merchandise alone were packed.
PACKAGE INSERT: For national promotion it would be desired to place 10,000 questionnaires in the deal combination merchandise only—spread evenly throughout production.
QUANTITIES: For Test City Placement—XX gross
For National Promotion—
XX,XXX doz. deal units + XX,XXX
XX,XXX doz. open stock Ammens— cases
BREAK DATES: For Test City Merchandise—May 1, 1956
For Possible Selling National Promotion—March 1, 19XX
For Possible Shipping National Promotion—May 1, 19XX

FIGURE 2

INVESTIGATION NO. S-10 (TRUSHAY-MUM COMB.)

DEAL MERCHANDISE: one Mum, medium, combined with one Trushay, guest, to sell for the price of the Mum alone. (A Trushay sampling device).
UNIT PACKAGE: A special "boot-carton" to hold the Trushay **atop** the Mum. (Robertson model No. 11 second revision—printed red and black).
INTERMEDIATE PACKAGE: None
OUTSIDE PACKAGE: Kraft Corrugated shipper to hold 2 dozen unit packages.
PACKAGE INSERT: 10,000 to be used in national merchandise only—evenly spaced through production.
QUANTITIES: For Test City Placement—XX gross
For National Promotion—XX,XXX dozen (XX,XXX cases)
BREAK DATES: For Test City Placement—June 1, 19XX
For National Promotion—July 1, 19XX

When issued, the request is assigned a number for ease of reference. Figures 1 and 2 show samples of investigation requests.

We attach considerable importance to the request because: 1. It puts out the problem simultaneously to all concerned. 2. By having all concerned apprised of the problem—and its facets—it permits proper correction on any facet, as for example: a) The timetable may be impractical, b) The quantities may be unrealistic, c) Package difficulties may be obvious. 3. It puts a "tag" on the investigation via the request number.

On receipt of the request, the New York coordinator moves into action. He secures suggestions from the package laboratory and the production member of the task group. Next he contacts the supplier, submitting the problem and suggested solutions. The supplier prepares different types of initial samples based on the suggested solutions as well as some of his own ideas. The initial sample models are prepared in duplicate and are sent both to New York and Hillside for the first weeding by all task group members. The sample models left after the weeding are then ordered in large enough quantities for laboratory testing and for finishing line evaluations and for costings.

The package laboratory tests determine whether the package is of sound design and is capable of holding up in shipping, handling and use. The finishing

(Continued on page 856)

Packaging and Selling

Changing Men's Toiletries

Substantial changes are apparently taking place in that part of the cosmetic industry classified as men's toiletries. Whether this is progress or evolution, or just what it means, will become clear over the next year or so.

To understand these changes, it is necessary to briefly review the history of these particular cosmetic products.

Men's toiletries are probably as old as any cosmetic products, and it is very possible that cosmetics for the adornment of the male sex were the first products that could be classified as cosmetics, in history.

In this country there was a thriving business in men's toiletries when the industry was a very small, feeble creature. At that time, let's say 50 years ago, every product now included in the men's toiletries lines were made and sold in this country, but, in addition, quite a number of products, which have now disappeared, such as mustache wax, were part of the men's toiletries lines of those days.

In other words, there were more cosmetics and toiletries available to the decorative male of 50 years ago than there are today.

Preceding the last war, that is in the early 1940's, this country had a thriving business in men's toiletries running to about $25,000,000 annually at retail prices. This figure excludes that basic staple, the shaving cream or shaving soap, but did include primarily the after shave lotion, men's cologne and a few accessories.

These products could all be termed essentially staples. They were sold almost entirely in the retail drug store, and they were priced at $1.00 or usually well under that. They did not in any sense fall within the gift classification, and they were purchased almost exclusively by men as automatically as these particular men purchased their shaving soap, cream or stick.

Just before the war, some new individuals entered this industry with a new creative idea in the men's field that could almost be said to establish a new men's toiletries industry, basically non-competitive to the one then existing. These men came into the industry almost at the same time, with almost the same basic idea, but with radically different, imaginative packaging conceptions. Among these men were Alfred McKelvy, who introduced Seaforth to the trade, Jack Moore, who introduced Sportsman, and Nassour, who introduced Cortley. Soon after this came Kingsmen and within three years there followed over 100 new introductions of new men's toiletry lines, all based upon the same general conception.

This general conception was that a very large market existed for men's toiletries in the gift field, that the basic appeal should be in packaging, and that the theme should be one which would essentially appeal to women as an acceptable gift for one particular man.

These new gift toiletries were priced at $1 and substantially over, were purchased almost entirely by women, and because of their gift character, their price and the general method of franchise or selection distribution selling, offered a great appeal to the department store. For this reason, the department store, which before this had done practically no business in men's toiletries, opened wide their doors to this gift appeal kind of merchandise, and very soon brought a new addition to the cosmetic business which equalled or exceeded the business done by the staples in the drug store.

In the meantime, two cosmetic companies, that is Shulton and Yardley, had each discovered an element that was largely absent from the men's toiletry field, that is an odor appeal to the man himself, which created a substantial repeat business from men. The products of these two companies, originally distributed from the department store, expanded into a middle ground distribution that was neither mass nor selected class.

In the period after the war, a very high percentage of the war born department store gift-packaged men's toiletries lines disappeared from sight, leaving as a basis a relatively small group of major companies, which still included such names as Sportsman, Seaforth, Kingsmen and one or two brands of the leading perfume houses. The total business of all these lines decreased, but still remained around $20,000,000.

This means that until just recently in the men's toiletries field, there were three well defined classifications, each operating within a well defined and different system of distribution, each with different characteristics, and each largely non-competitive with one another.

The first classification, as we have mentioned, are those staples such as Williams', Jergens', Mennens' and Colgates' products. These brands are sold almost entirely in drug stores in mass distribution. They are still basically priced under $1.00. Their gift position is incidental and their odors, while excellent, are not particularly the basis for repeat sales. They are, in fact, as functional and as staple as shaving cream.

The second classification consists of Shulton and Yardley. These products have some department store distribution, but have expanded beyond this circle. These are excellently packaged and have some gift appeal, and in each case, they have a fragrance which

is basically the reason for their growth and success. In other words, these two middle class companies participate in the advantages to some extent of the other two groups.

The third group is almost entirely a packaging conception. The products of this group, of course, have excellent odors but the odors do not in any sense provide a basis for business expansion. These products are bought almost entirely by women as gifts and their continued existence depends exclusively on maintaining this gift appeal, on securing the cooperation of the type of cosmetic store which controls the gift business which means maintaining a supremacy in department store distribution.

The sale of men's toiletries, particularly in the gift class, faltered very badly after the war for several years, and then began to pick up. It is a fact, however, that to this day, this branch of the cosmetic industry is growing slower than possibly any other cosmetic product. It is probably true that the cosmetic industry in every single branch, has been losing a very substantial part of its share in the gift market of America. The loses in this part of the men's toiletries field simply emphasize the weakened industry position in gifts.

A guess might be hazarded that part of the reason for this loss is that most of the imagination seems to have gone out of the men's field. Nothing has been ventured within recent years, either as a striking new original theme or a striking new conception in packaging. The stalwart lines, which made men's toiletries a success in department stores and in the gift business have one by one gone over to new owners, where policy is moving along abruptly different lines.

While the first of these three groups of men's toiletries is holding its own, the third group, that is the gift group, is definitely languishing. There seems to be an intent on the part of some owners of this third group of toiletries, to move them over into one of the other two classifications. The trouble is that neither advertising nor good selling is the single answer to this, as these products are now conceived. There is no room in these other two groups for just gift merchandise, largely because most of the stores through which they sell have no capacity for any substantial gift business. Nor can they move over into the staple market or even into the middle group market, until, through research and good luck, they come up with a fragrance, which has of its own accord greater consumer appeal.

It looks as if a vacuum is about to occur in the gift field and in department store merchandising of men's toiletries. This we would say, opens up some substantial opportunities for some creative thinking such as happened when Al McKelvy and John Hudson Moore first entered this industry.

Growing Aerosol Deodorants

Aerosol anti-perspirants will have an 150 per cent sales increase over last year and year-round sales will increase. This is a prediction of Douglas Atlas, Vice President of G. Barr and Company, Chicago.

According to Mr. Atlas, last year's sale of aerosol anti-perspirants were 2,000,000 units or approximately three per cent of the entire deodorant market. The first aerosol deodorant was marketed 16 months ago, and expected sales this year should reach 5,000,000 units of aerosol deodorant or about 7½ per cent of sales.

According to Mr. Atlas, hot weather alone is not responsible for the predicted sales climb. "The swift, effective spray is adaptable to men's requirements for an under-arm toiletry. This is because the aerosol may be used easily on unshaved skin surfaces. In addition, the quick, neat, push-button application of an aerosol anti-perspirant eliminates having to wash any substance off the hands." He added that the fast-drying quality of aerosol spray particles tend to avoid liquid running on the skin or having to wait for the deodorant to dry before dressing.

French Promotion

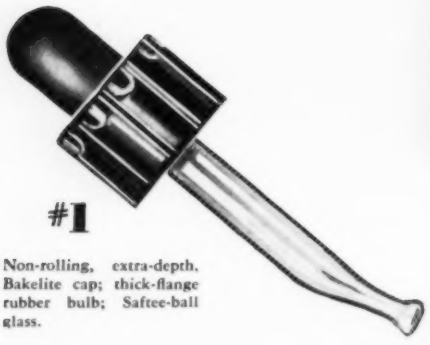
A few weeks ago we reported in this department the results of a department store survey on the progress being made in securing distribution by the French treatment lines. The reason this survey was made was that it seemed rather startling to us that these new French lines should receive such a ready welcome in the face of industry competition and in what is probably the most competitive part of the cosmetic industry.

The results of this survey, which we published here, indicated an uneasiness on the part of some department store executives over the distribution policy of several leading American treatment houses. These store executives thought that a number of leading cosmetic treatment houses were broadening their distribution to a point where such a thing as a retail franchise could no longer exist and where the department store could no longer find itself in a favorable competitive position. Some of these executives also thought that with the advent of mass advertising, and particularly television advertising by these companies, that their products would ultimately have to move out from a fashion classification into a plain, functional or utilitarian position.

As an example of the way the French houses are operating with department stores, we quote from the recent opening by Orlane of the Arnold Constable branch store at Hackensack, New Jersey.

The opening started at 8:45 A.M., when a police escort, with screaming sirens, sped through Bergen county to the Hackensack store. Following the police car were two cars, one flying the American, and the other the French flag. In these cars Paul Russell, Orlon's Vice President, the commercial consul of the French embassy, and an assorted group of talent.

There were several hundred invited guests for the opening, including the executives of Bergen County's women's clubs and local and state officials. A breakfast-reception started the promotion. Guests who entered saw the store's doorman turned Parisian, wearing a gendarme's uniform. Among the guests were the Chief of Polick of Hackensack, the Mayor of Hackensack, and many prominent socialites from



#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap: AMEKINE oil-resisting synthetic rubber bulb; blunt glass.

Improved bottle shape. Designed to lie flat for convenient labeling. Front provides ample label space.

New Perfection

DROPPING PARTS

Protect YOUR PRODUCT'S REPUTATION

Your product's hard-won reputation is risked every time it is taken from the medicine chest. Any inconvenience, such as a non-functioning dropper, will be permanently associated with it. You can remove this risk by entrusting your carefully-compounded preparation to New Perfection dropping parts—painstakingly made of quality materials for the utmost in dependability and cleanliness.

* ***We can supply dropping parts to fit your bottles or furnish complete with our own bottles.***

RUBBER BULBS

are supplied in many styles and colors. Oil-resisting AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS

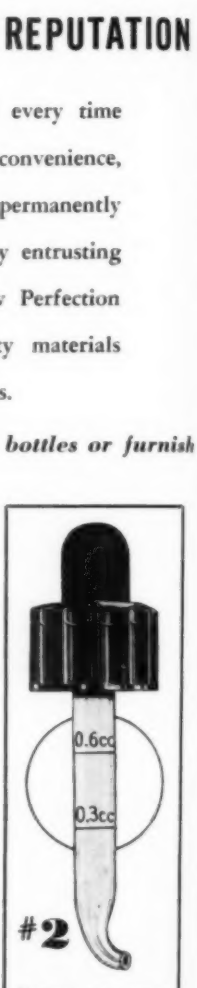
of plastic or metal, can be furnished in a complete range of sizes and colors.

DROPPER GLASSES

are available in a wide variety of styles and sizes. Plain or CALIBRATED in any color to mark specific dosages.

BOTTLES

in an attractive modernistic style in Amber, Blue, Green or Clear glass, are available, complete with dropping parts, in the following sizes: ⅛, ¼, ½, 1 and 2 oz.



Non-rolling extra-depth Bakelite cap; thick flange rubber bulb; CALIBRATED special bent glass.

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

this part of New Jersey. Guests received a gift flacon of Ecusson perfume, product of an associated company.

Five windows were given over to the theme, "April in Paris . . . Its excitement now yours." Parisian sales girls were imported for the occasion and colorful French posters and flower carts were used throughout the department. In other words, here was the kind of a sales promotion that was once used in establishing the leadership of American companies.

Both Ways at Once

As an example of the way some of the big cosmetic companies are vigorously proceeding in every direction at the same time, here's a quote from the last annual report of the Warner-Lambert Pharmaceutical Company.

The statement first tells how Richard Hudnut hair product sales have been consolidated with the marketing and merchandising of Listerine. "Immediate effects have been to expedite the distribution through self-service outlets of the Hudnut 'Quick' and 'Pin Quick' home permanents, 'Enriched Creme Shampoos' and 'Creme Rinse.'"

"Another benefit of this integration is that it decentralizes the company's marketing and merchandising effort in the toiletry and cosmetic field. One group now concentrates on sales in the hair products line which requires a mass promotional approach. Another group specializes in the Richard Hudnut treatment line of creams, lotions and make up, the sales of which are particularly sensitive to brand prestige and dealer support."

"Other factors favoring the future prospects of this operation are new products in the high fashion Du Barry line of beauty and hair preparations."

Sportsmen Toiletries have been re-packaged and priced more competitively within the last year and released for broader retail distribution.

June "Beauty Fashion"

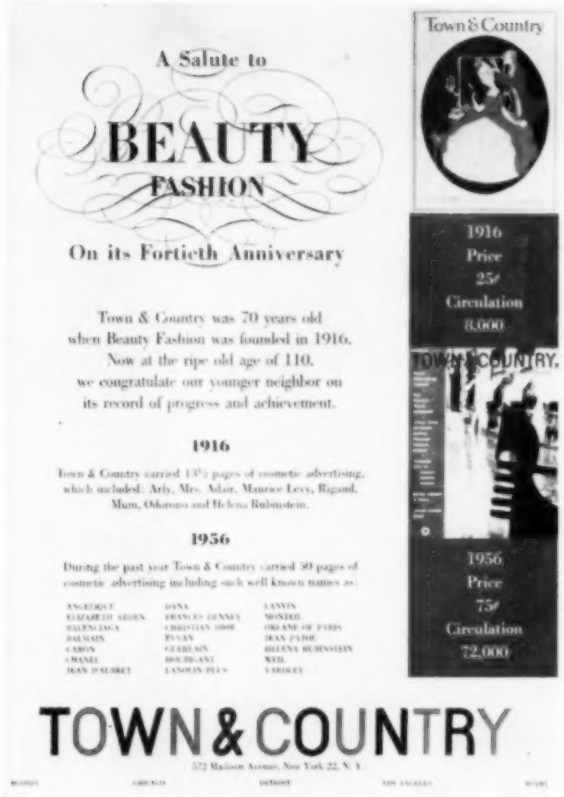
With the June issue, "Beauty Fashion" arrives at the mature age of 40 years old. As American trade publications go, this is a fairly venerable age.

Looking back over the first several issues of this magazine forty years ago, when it was called "Toilet Requisites," it is rather startling to see what a very tiny industry this proud, young and eager billion dollar cosmetic industry was at that time.

Except for a few American staples, most of the cosmetics, practically all of the fragrances and a large share of the toilet articles were imports.

In cosmetic distribution this was more than 35 years before anyone thought of putting a toilet article in a grocery store, nearly 20 years before the appearance of a cosmetic counter in a variety store and in fact, at this time, that is 40 years ago, the department store was in its very early stages as a retail cosmetic distributor. These were the days of a tiny industry and a relatively small distribution to a limited number of pharmacies.

The June issue of "Beauty Fashion" will be a review of these dynamic and romantic years. It will show how glamour and fashion in this industry has walked hand in hand with technical advances in production, in packaging and in chemistry.



We show here an advertisement in June "Beauty Fashion" by one of our neighbors in the consumer field. We feel quite proud of 40 years of publishing. Our neighbor must be really giddy with pride to have achieved a record of 110 years.

The Hyperbolic Spiral

In a recent booklet, "Don't Raise the Bridge, Boys . . . Lower the River," "The New Yorker" makes it clear in a series of graphic illustrations, that it is entirely fed to the teeth with exaggerated advertising claims.

Here is what "The New Yorker" has to say towards, the end of this booklet, when it sums up its conclusions:

"The New Yorker for over 30 years has been waging a long, lonely and losing struggle against the obvious exaggeration, the unprovable claim, the meaningless superlative. In short—the hyperbolic spiral.

"The struggle gets longer, lonelier, and losinger all the time.

"Recently, in order to check on the success, if any, of this stubborn crusade, we had our Mrs. Pemberton make a survey of our own pages for a six-month period. She found 312 'finests,' 281 'world's bests,'

ADD THE MAGIC OF GENUINE GOLD...

for packaging of enduring beauty

What better way is there to package quality products than to wrap them in the luxury of Hanovia Bright Gold.

The sparkling beauty and simple elegance of 22 Karat Bright Gold, applied economically by silk screen process, adds enchantment and charm to your packaging . . . adds new impact to your sales program.

And here's more magic: packaging beauty and distinction can be yours with Hanovia Bright Gold at a price comparable to common labeling. Durability, too, is another magical quality of this liquid gold. Fired on ACL, 22 Karat Bright Gold resists abrasion and solvents to provide packaging of truly enduring beauty.

Consult your glass supplier or glass decorator for quotations.

ENGELHARD INDUSTRIES

Hanovia

HANOVIA

CHEMICAL & MANUFACTURING COMPANY

1 West Central Avenue, East Newark, New Jersey

and 58 'America's onlys," together with 47 other bits and pieces of improbable nonsense.

"If we flatly refused to print any of this sort of stuff, we would soon go out of business—a step we can ill afford."

One Helps All

When a leading brand is widely advertised and promoted, these same activities carry the non-featured brands along in its wake. This is common experience. Now a market research organization has made a study of this situation for the National Canners' Association's trade and consumer relations program.

This study covered a number of food promotions in supermarkets. Here are some of the results:

In tomato juice promotion, the featured brand increased sales 460 per cent but the average increase of all other brands was 260 per cent.

A fruit cocktail brand heavily promoted, increased sales 163.4 per cent, but the total of all other brands increased 204.8 per cent.

Beef stew showed an increase for the advertised brand of 591.7 per cent, with total increase of all brands of 350.9 per cent.

Notes and Comments

A "girdle" spray is the newest aerosol achievement. We don't know whether to call it a cosmetic or not. This product is a deodorant talcum powder, pleasantly perfumed with a light, honeysuckle fragrance, and its function is to make the girdle slide on or off as easily as a slip. The power contains hexachlorophene and is made by the Eppi Products Corporation of Cleveland, Ohio.

• ——— •

Fortunately, trading stamps have not disrupted this industry as they have the food industry. As a competitive weapon of the big food chains in certain cities, they are bringing about the kind of trade wars that look something like a depression at its lowest ebb.

The executive secretary of Associated Food Retailers of Greater Chicago recently described trading stamps as "prostitution at their best and economic insanity at their worst."

"Chicago today," he said, "stands as an island surrounded by a sea of stamp plans. If somebody moves into Chicago, all hell will break loose. Chicago is big league. When it happens here it will make other sections of the country look like a Maypole dance."

• ——— •

Advertisements in color are 50 per cent more effective than black and white. This is one of the conclusions from a study of color in advertising conducted for "Printers' Ink."

• ——— •

This has been a very fruitful and happy Spring for many cosmetic companies. In the retail magazine, "Beauty Fashion" there have been quite a number of announcements and press releases noting the substantial increase in business for specific companies.

A recent release of Charles A. Pennock, president of the Hudnut Sales Company states that sales for the Du Barry Division during the first quarter showed an increase of 57 per cent over 1955. Du Barry, a franchise line, distributed on a limited, selected basis through key department and drug stores is tightening its distribution and concentrating on building the business on its individual franchise accounts. Du Barry has had two promotions this year, one on the hair line and the other on make-up.

• ——— •

Today, many industries are returning better than 20 per cent on net worth and the average for all manufacturing operations in this country was over 13½ per cent in 1955. That's quite a bit better than the average for this industry.

• ——— •

Nash Motors may have found a way to stimulate a little customer attention and some alertness on the part of their dealer salesmen. "Mystery buyers" loaded with $50 bills are now calling on Nash dealers to find the perfect Nash salesman. Each salesman who is considered aggressive and well informed is given $50 in cash on the spot.

• ——— •

There is little doubt that the food industry is in the forefront in research to get the package to carry as much as possible the full burden of retail salesmanship. In a recent talk, Paul Willis, President, Grocery Manufacturers of America said:

"You hear a good deal about 'impulse' buying these days. Impulse or not, salesmanship is needed to substitute for the clerk who used to hold forth in yesterday's grocery store. The package is it. Manufacturers have put new life into package designs, which can draw notice, recall the product's advertised qualities, and then sell it. This 'pick-me-up and take-me-home' appeal has a big assist from new packaging materials."

• ——— •

We have the impression that there is a substantial increase in interest for bath cosmetics. This impression is based on the fact that several companies have recently entered this field with what they say is a new type of cosmetic bath oil and the fact that reports from the retail trade show increasing consumer interest in this product.

There may not be anything particularly new about these bath oils, but they are being promoted as a cosmetic product as well as a bath product. In other words, after the bath, a fine film of fragrant oil is left deposited on the body—a cosmetic effect which women with dry skin apparently are enjoying.

• ——— •

As the old saying has it, here we go again, boys. In other words, there seems to be no rest for the weary in the tooth paste business.

The newest development reported from some research work at the College of Physicians and Surgeons, a San Francisco Dental School could bring a rash of new brands and a rash of new advertising campaigns.

The new idea is a bug called bacillus brebis. When this bug is applied to the teeth, particularly to the crevices, it is reputed to live over quite a long period and to be completely destructive of all tooth decay organisms.

CONTROL IS A

IS

ALL-IMPORTANT

with Anchor Hocking!

Regardless of what you pack Anchor Hocking makes an Anchorglass container in a style, size and color to most attractively, efficiently and economically package it. And, to seal your glass-packed products, there are Anchor molded screw caps and metal screw, lug and vacuum types available—one or more of which will completely satisfy your diverse and specialized requirements.

THE controls applied throughout your production and packaging operations are all-important to you. By the same token, the manufacturing controls employed by Anchor Hocking are very important to you, also.

Anchor Hocking exercises literally hundreds of exacting controls, tests and checks daily in the manufacture of its glass containers and closures. From the selection of all raw materials used to the final inspection, every operation is under meticulous control.

And all of this control, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality, dependable Anchorglass® containers and Anchor® screw, lug, vacuum, metal and molded closures that will give you high-speed, dependable production and protection.

ANCHOR HOCKING

GLASS CORPORATION *Lancaster, Ohio*

NEWS IN PACKAGING...

Cosmetics Aerosol Use Up 68 Per Cent

A sixty-eight per cent increase in the number of aerosols used for hair lacquers and other personal products—excluding shaving lather—is indicated in the Chemical Specialties Manufacturers Association's Aerosol Pressure Products Survey for 1955. Unit figures are: 68,011,568 in 1955 as compared with 40,379,123 in 1954, an increase of 27,632,445. The shaving lather figure of 45,387,375 represents a 7.2 increase over 1954.

Contrasted with the total number of aerosols produced in 1955, 240,000,000—30 per cent higher than the 1954 output—the sixty-eight increase for cosmetics attests to the continuingly dominant position of this industry in the aerosol market. The cosmetics' figure of 68,011,568 includes 9,044,084 glass containers, 22,862,486 metal containers of twelve ounces or more, and 36,104,998 metal containers of six ounces or less. In comparison with the 9,044,084 glass containers used by the cosmetics industry, the combined total of all other industries was 1,376,467.

Predicts '60 Glass Cont. Use

Cosmetic manufacturers will use 31 per cent more glass containers in 1960 than they did in 1955, according to a prediction by C. C. Merrifield, president of the Econometric Institute, an independent economic organization. Addressing some 150 members of the Glass Container Manufacturers Institute at the GCMI annual meeting in White Sulphur Springs, W. Va., Mr. Merrifield also predicted that shipments of glass containers for all American industries would exceed 163 million gross, 18 per cent more than the record 1955 shipments of 138 million gross.

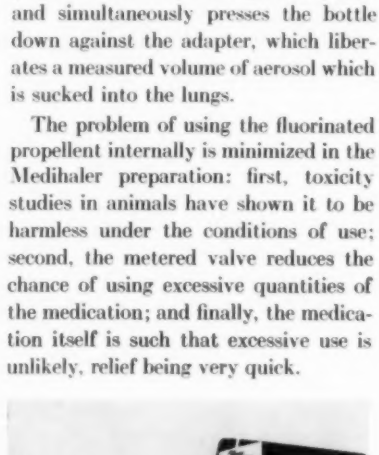
"Demand for glass containers from the toiletries industry is expected to show one of the largest gains," he said, "because of our analysis of age distribution five years hence. A rising number of teen-age girls will increase the number of consumers of these end-use products."

Aerosol for Internal Use

By the application of sound medical and pharmacological principles and a metered valve, Dr. G. L. Maison of Riker Laboratories has developed what

is believed to be the first aerosol with a fluorinated-chlorinated propellent for internal use. The preparation, Medihaler, contains either epinephrine or isoproterenol for the treatment of asthmatic attacks; these medicaments are much more effective when administered as aerosols. The 10 cc. Wheaton bottle contains the active ingredient along with alcohol and the fluorinated propellent and is fitted with an Emson metered valve. The bottle is attached, in an inverted position, to a plastic oral adapter which is held in the mouth. The patient breathes in through the mouth and simultaneously presses the bottle down against the adapter, which liberates a measured volume of aerosol which is sucked into the lungs.

The problem of using the fluorinated propellent internally is minimized in the Medihaler preparation: first, toxicity studies in animals have shown it to be harmless under the conditions of use; second, the metered valve reduces the chance of using excessive quantities of the medication; and finally, the medication itself is such that excessive use is unlikely, relief being very quick.



DeMerell Heads Glass Cont. Inst.

S. B. DeMerell, vice-president and a director of the Anchor Hocking Glass Corporation, was elected president of the Glass Container Manufacturers Institute last month at the institute's twelfth annual meeting, held in White Surphur Springs, W. Va Edmund F. Ball, president of Ball Brothers Company, Inc., was elected vice-president of GCMI.

A native of Michigan, Mr. DeMerell got his industrial engineering degree from Michigan State University. He joined the Capstan Glass Company, an affiliate of Anchor Cap and Closure Corporation, in 1925. After holding various executive posts with Capstan, he was elected a vice-president of the parent company in 1946 and a member of the board in 1953

S. B. DEMERELL

Appointed by Old Empire

Hans W. Maucher, formerly sales representative for Old Empire, Inc., Newark, has been promoted to sales manager; Robert A. Ehrlich has been appointed sales representative, and Dr. Paul Schmitt has been named director of research and development on a consulting basis, according to an announcement by John de Elorza, executive vice-president of the company. Acquisition of a building with 20,000 square feet of space, located at 2121 Sylvan Avenue, Newark, has also been announced by Mr. de Elorza.

Aerosol for Skin Irritations

A new spray-on preparation for relief of itching and pain due to ivy and oak poisoning, hives, insect bites, and other minor skin irritations commonly occurring during Summer months, is being marketed by Lederle Laboratories.

The preparation, Rhulispray, comes in a three-ounce aerosol and is sprayed directly on the affected areas. Since it dries rapidly, clothing can be protected.

MAXWELL D. SMART

DONALD M. SHAW

Sales Reps for Packaging Items

Monroe-Danford & Company, Lincoln Park, N. J., recently formed sales-representatives firm, will supply packaging items to the drug and cosmetic industry, according to an announcement by Donald M. Shaw and Maxwell D. Smart, organizers of the company. A consulting service on packaging and production problems is available, the announcement states.

Mr. Shaw was formerly treasurer and general manager of the Richford Corporation. For the past ten years Mr. Smart has been plant manager and technical director for M. W. Parsons-Plymouth Inc., manufacturers of cosmetic raw materials.

Knox Glass Chicago Sales Rep

Harry F. McCracken has been appointed a sales representative of Knox Glass, Inc. and assigned to the Chicago office, according to an announcement by C. L. (Roy) Rossman, general sales manager.

Formerly sales manager for the Aridor cap division of Ball Brothers, previously sales manager of the General Cap Company, and in both instances located in Chicago, Mr. McCracken also has had experience in the glass container field. His headquarters will be at 540 North Michigan Avenue.

Drug, Toiletry Tubes Set Record

A record number of collapsible metal tubes were shipped to the drug and cosmetic industry during the first quarter of 1956, according to Collapsible Tube Manufacturers Council reports.

Tubes for toiletries totaled 210,282,516 units, an increase of 32.2 per cent over first quarter shipments in 1955; pharmaceuticals totaled 63,159,408 units, up 25.8 per cent.

First-quarter shipments for all tube uses were 320,307,264 or 27.3 per cent above the same period last year. March shipments of 117,403,344 units set a monthly high and were 36.6 per cent greater than for March, 1955.

New Crown Cork Div. Sales Setup

A district sales form of organization has been established within the crown and closure division of Crown Cork & Seal Company, Inc., according to an announcement by S. V. Tuttas, division manager.

Twelve district sales offices will handle all sales and service for all products the division sells. Under the direct supervision of William Fox, field sales manager, the district offices will cover 39 states. Nine Western states will continue to be served by the company's Western division.

District sales managers appointed are: Don Naylor, Baltimore; Rube Wagner, Chicago; S. Kriegsman, Cincinnati; W. I. Lang, Dallas; W. M. Jackson, Detroit; H. D. Bloom, Leeds, Ala.; K. A. Boss, New Orleans; G. B. Dingley, New York; E. P. Stuart, Orlando, Fla.; W. F. Kneip, Jr., Philadelphia; V. R. Hoffman, St. Louis; and E. L. Brooks, Jr., St. Paul.

Principal package design changes for Southern Rose Hair Dressing and Pinol Pine-Tar Shampoo include adoption of Owens-Illinois Glass Company's Contoure Line bottles for both products and new individual cartons and labels for the hair dressing. The molded plastic closures are by Armstrong Cork Company. The packages have been redesigned so as to increase shelf appeal.

Helaine Seager, Inc. of Hollywood, Calif. and Newark, N. J. has added Pink Ice Liquid Home Facial to its line. Above it is flanked by the original Pink Ice—in solid form—and Tinje, the Helaine Seager shampoo. Hazel-Atlas Glass Company has designed, decorated in white, and produced the jars and bottles so as to help achieve quick identification as well as attractive shelf and dressing table displays.

E. C. Emanuel, rear row, extreme left, general manager of Armstrong Cork Company's glass and closure products research laboratories, Lancaster, Pa., is shown with members of the Packaging Institute's Southeastern Production Line Committee during their recent tour of Armstrong's research installation. Rear row, left to right, Mr. Emanuel; Larry Hewlett, Wyeth Laboratories; Dr. John Sharf, Armstrong Cork; W. E. Angelo, S. E. Massengill Co.; Norman Herr, Winthrop Laboratories; Carr Parsons, Lederle Laboratories; T. K. Smith, Serutan Company; W. S. Farrell, Smith, Kline & French Laboratories; W. W. Brown, Sharpe & Dohme; Dr. Frank Campins, Polymer Industries; John Warren, American Management Association; Joseph Benner, Armstrong Cork. Front row, left to right, Dr. L. C. Riesch and C. K. Englehart, both of Wyeth Laboratories; Howard Baines, E. R. Squibb & Sons; R. Bartlett, Smith, Kline & French Laboratories; Chairman Roy W. Abling, Sharp & Dohme; R. S. Morrison, Winthrop Laboratories; Chas. Feld, Packaging Institute.

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Patent THOUGHTS AND TRENDS

by Thomas Cifelli, Jr.
PATENT ATTORNEY*

ANOTHER CONGRESSIONAL REVIEW OF THE AMERICAN PATENT SYSTEM

It may come as a surprise to many to learn that the American patent system is again being reviewed by a committee of Congress. Many people have been under the impression that the Patent Act of 1952 was the result of a comprehensive review of the patent system. The fact of the matter, however, is that the 1952 Act was mainly a codification, not a revision. Indeed, a number of changes were suggested at that time but were passed over in order to avoid as much controversy as possible, such changes being deferred for later consideration.

The present review is being undertaken by the standing Subcommittee on Patents, Trademarks, and Copyrights of the Senate. This subcommittee has taken testimony, has had its staff make some preparatory investigation and has received reports and papers from experts. Although the work of the subcommittee is not complete it has issued a preliminary report (Senate report No. 1464, 84th Congress, 2nd Session). Some highlights from this report are noted here.

I. Preliminary Conclusions of the Subcommittee

1. *The present patent system should be adjusted to modern conditions*

The report notes that when the patent laws were first drawn invention was almost exclusively the product of the efforts of individuals working alone but that today it is largely the work of research laboratories. In 1938 more than 50 per cent of all U. S. patents were issued to corporations. The subcommittee estimates that now only 40 per cent of the patents go to individuals.

According to the report, individual inventors are very dissatisfied. In addition to the normal problems attending any new business their complaint is that unnecessary administrative and judicial hazards now incurred in securing and protecting a patent represent the straw that breaks the camel's back.

The committee noted however that the fault often lies with the inventors themselves because many of them waste time and money in filing patent applications that should never have been filed and attempt to exploit inventions that should never be exploited. At the same time the report notes that the individual worker should be encouraged because he performs a vital and important function. In this connection the experience of the TV program, The Big Idea, was noted. Of the 1600 ideas which were publicized over this program almost 500 have found their way into the market place, some being extremely successful. Another interesting facet was that when a certain manufacturer described one of his problems on this TV program six solutions were found to be of practical merit.

The subcommittee noted that one of the obstacles to successful negotiation between inventors and company research laboratories is the common use by companies of "Ideas Submission" forms which outside inventors must sign before their ideas will even be considered. Such forms are legalistic in wording and sweeping in the protection that they give the manufacturers. However, the latter justify this situation on the ground of need to protect themselves both against unwarranted claims and against liability for submission of ideas from the outside on which the research department of the company itself is already at work.

2. *The Patent Office and the United States courts are in conflict as to what is and what is not patentable.*

The report found that more than 60 per cent of the patents brought before U. S. Courts of Appeals since 1947 have been invalidated. The lower district courts have ruled out more than 53 per cent of the patents. The committee feels that every effort should be made, consistent with the public interest and constitutional objectives of the patent system, to narrow this gap.

3. *Need for maintaining and expanding qualified Patent Office personnel*

The report notes that there is a high turnover in personnel, many Examiners leaving the Patent Office to obtain positions in industry. This results in slower and less competent processing of applications because of the unduly high proportion of less qualified or inexperienced examiners left behind.

Another problem in the Patent Office is to improve the classification system because the vast storehouse of technical information disclosed in patents should be easily available to the public and because an adequate classification is necessary in order to permit the Patent Office examiners to review the prior art properly.

The report notes that the long pendency of applications (about 3½ years) is a serious problem not only to those who require the issuance of patents in order to interest risk capital but also from the standpoint of manufacturers innocent of any wrongful intent to embark upon manufacture of an item only to find after the lapse of some years that a patent has been issued thereon.

4. *The need for a single Court of Patent Appeals*

The report favors such a court which would replace the present system in which the United States is divided into 10 separate circuits plus the District of Columbia. The report favors judges having intimate acquaintance with patent law problems.

Also, the report favors the provision of technically trained experts for such a court.

In line with this suggestion, S. 3744 was introduced on April 26, 1956.

II. Summary of Subcommittee Work During the First Session and Proposed Agenda for the Second Session

1. *October hearings on major patent problems*

The report notes that about 50 inventors, judges and patent attorneys participated in round-table conferences held in October, 1955. Also, about 58 persons filed statements. The transcript of the hearings is found under the title "American Patent System," 84th Congress, the statements forming an appendix to the hearings.

(Continued on page 792)

*Richards and Cifelli
Newark, New Jersey

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Even if you haven't any previous experience, you can put your product in an aerosol package. Contract loaders have the know-how and necessary specialized equipment to do the job for you. Contract fillers can help you with product evaluation, formulation, testing, container selection and labeling, filling, packing and shipping. Du Pont can help you select loaders best equipped for your needs.

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"Aerosol packaging boosts hair fixative sales 800%," reports a Des Plaines, Illinois, pharmacist. Sales success of aerosol hair fixatives is one of today's most remarkable marketing stories. Your product in an aerosol could pile up sales records, too.

IN AN AEROSOL PACKAGE

Here's how Du Pont can help add the profit-producing aerosol idea to your product

The growing variety of aerosols featured by retailers today offers convincing evidence of the profit potential in aerosol packaging. At the point of sale, retailers know consumers prefer the aerosol method of dispensing. Again and again, new sales spark has been added to an old product and immediate consumer acceptance gained for a new one by putting it in an aerosol package. You can profit, too, by packaging your product in an aerosol dispenser.

One of the surest ways to succeed with an aerosol is to call in Du Pont to help you get started. Since the original aerosol insecticide was developed, Du Pont has worked closely with marketers and aerosol loaders to help in producing top-quality products. Annual Du Pont market surveys have spotlighted trends in aerosol sales for marketers and distributors. This accumulated experience of laboratory experts and marketing specialists is on tap to help you get started in aerosols.

In assisting you with your aerosol-formulation problems, Du Pont can help you select the best "Freon"* propellent for your product. "Freon" propellents are ideal for aerosols, because they are safe—nonflammable, nonexplosive and virtually nontoxic. "Freon" propellents are pure—Du Pont's 25 years' experience manufacturing "Freon" compounds assures the utmost in purity and quality. There is sure to be a "Freon" propellent ideally suited to your aerosol product.

Find out more about aerosol packaging and what Du Pont can do to help increase consumer acceptance of your product. Send for your copy of the informative booklet "Package for Profit." It's free—mail the coupon today.

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**"Freon" is Du Pont's registered trademark for its fluorinated hydrocarbon propellents*

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*Company*_____

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(*Continued from page 789*)

2. *Research studies in process*

Judge Learned Hand urged a thorough going inquiry into the question of how the present patent system works. Heeding this advice, the subcommittee has arranged for the preparation of research papers covering a variety of subjects in the patent field.

In this connection, Dr. Vannevar Bush is to report on proposals to strengthen patent validity and to protect against the misuse of patents, including their use for monopolistic purposes.

Dr. Walton Hamilton, author of TNEC Monograph 31, is making a study of the applicable technological and economic tests in the grant and use of patents, including analysis of the technical criteria that should be considered in determining whether a patent should issue and the economic criteria to be applied in determining the validity of licensing practices, concentration of patents and other patent conditions affecting the competitive structure of business and industry.

Dr. Archie Palmer is studying patents and research with respect to the policies and administration of non-profit and university research organizations.

Mr. John Schulman is undertaking a comparison of patents, copyrights and trademarks and of the respective functions, purposes and objectives served by these different types of property.

Professor Seymour Melman is examining definitions and legal tests of "invention" as applied in the patent laws in relation to modern industrial research methods, and the operation of the patent system generally in its application to corporate research.

Mr. Nathaniel Sage is studying the patent system in terms of its significance as an aid to individual and independent inventors and to new and small businesses in their efforts to develop and successfully commercialize new invention.

Professor Leonard Emmerglick is to analyze and evaluate the patent recommendations of the report of the Attorney General's National Committee to Study the Antitrust Laws, with especial attention to the probable effect of these recommendations upon the trial of antitrust cases involving patent issues.

Mr. Raymond Vernon is preparing a study of United States business and governmental policies and practices in relation to patents and technology involved in international trade.

Professor Murray Friedman is undertaking certain institutional studies relating generally to the relationship of research and technology to industrial size, and the competitive significance of this relationship.

Mr. P. J. Federico is preparing a digest tracing the historical development of proposals presented to Congress from 1870 to date for reforming and improving the patent system.

The Library of Congress is undertaking several projects for the subcommittee, including the following:

1. Efforts to establish a statutory standard of invention;
2. recordation of patent license and assignment agreements and regulation of international patent cartels, including appropriate parts of Federal incorporation proposals and proceedings with respect to the Habana charter;
3. licensing of patents, including various compulsory licensing proposals and provision for voluntary registration of patents available for license, as well as bills to require the licensing or dedication of Government - owned patents;
4. recommendations for Government assistance to and encouragement of invention and research, including proposals for dealing with inventions made by or for the Government, reward of Government - employed inventors, creation of organizations designed to encourage and supervise research such as the National Research Council, National Inventors Council, and National Science Foundation, aid to private inventors through assistance, subsidy, awards, dissemination of information, etc., and proposals for favorable tax treatment of research expense and patent income;
5. Patent Office fees; and
6. proposals for expediting Patent Office procedures, including the 20-year law.

A number of other studies are in the course of preparation. According to the report as the studies are completed they will be printed and made available for public distribution.

3. *Staff investigations*

a. Compulsory patent licensing

A complete review of every antitrust decree in which compulsory licensing of patents was required is being undertaken by the subcommittee in order to determine how effective it has been in opening industry to competition and what practical problems have arisen in the administrative of compulsory licensing.

b. Patent-antitrust problems
c. Relation of the individual inventor to corporate research
d. The automobile patent pool
e. Electronics patents

4. *Legislative action*

The report notes that the chairman of the Subcommittee is ready to submit drafts of the following bills for submission to the Congress:

1. A statement of intent by Congress that patents shall be issued only to inventors in accordance with the public interest and only after thorough search and consideration of the prior art, but after once issued by the Patent Office patents shall not be held invalid except upon the basis of clear and convincing evidence of improper issuance or on the ground of fraud.
2. A bill which would create in the Department of Commerce an agency to assist inventors by making inventions more readily available to industry.
3. The so-called 20-year bill, which was passed by the Senate April 26, 1940, and which would limit the term of a patent to 20 years from the date of filing of the application but in no case more than 17 years from the date of issuance. S 3745 was actually introduced on April 26, 1956.
4. A compulsory recording of license agreements bill which passed the House of Representatives April 1, 1946.
5. A bill permitting revocation or cancellation of patents on motion of the Patent Office, interested persons, or the Attorney General which in large measure follows the recommendations of the National Patent Planning Commission established by Executive order in 1941.
6. A bill for the creation of so-called short-term or minor patents and patents of addition which are found in the laws of many foreign countries.
7. A bill for filing evidence of invention similar to a proposal which passed the Senate October 9, 1949.

(*Continued on page 859*)

NEWS...

Internat. Cosmetic Congress

The key role of American chemists in the booming U. S. cosmetic industry was described by Robert A. Kramer, the official representative of the U. S. Society of Cosmetic Chemists, when he addressed the Tenth International Cosmetic Congress in Brussels. Scientists from eleven counties delivered papers at the Congress, which met at the Palais D'Egmont from May 21 to 24.

Mr. Kramer, vice-president and sales manager of Evans Chemetics, Inc., is secretary of the Society of Cosmetic Chemists. With him at the Brussels meeting was Dr. Lloyd Hazelton, a member of the SCC and head of Hazelton Laboratories, Falls Church, Va.

ROBERT A. KRAMER

Klarmann Receives Hon. D.S.

In recognition of his contributions in the field of antiseptics and germicides, Dr. E. G. Klarmann, president of the Chemical Specialities Manufacturers Association and vice-president and manager of technical services of Lehn & Fink, Inc., received the honorary degree of Doctor of Science June 11 at commencement exercises of the Philadelphia College of Pharmacy and Science.

Elected vice-chairman of the scientific section of the Toilet Goods Association last month, Dr. Klarmann is a medalist and former president of the Society of Cosmetic Chemists. He is a lecturer in dermatology and syphilology at the New York University Post-Graduate School of Medicine, author or co-author of many publications and patents, and a member of several scientific societies.

Corn States Labs Vice-Pres.

Joseph W. Marmon of Eli Lilly and Company has been named vice-president and member of the board of Corn States Laboratories, Inc., Omaha, Lilly's new subsidiary. He reports directly to Guy H. Williams, president of Corn States, which distributes veterinary biological and pharmaceutical products.

With Lilly seventeen years, Mr. Marmon has held various positions in the company and has been director of production methods and the packaging division. Other Corn States officers and directors are Forrest Teel, board chairman; W. M. Wheeler Jr., secretary; L. H. Ouren, treasurer and assistant secretary; E. N. Beesley, F. M. Hadley, and M. K. Jarvis.

Edward Buesking will replace Mr. Marmon as division director at Lilly; W. R. Netherton will succeed Mr. Buesking as manager of the Kentucky Avenue pharmaceutical production departments.

TG Ind. Golf Winners

Four trophies were awarded at the 1956 Toilet Goods Industry Golf Tournament, held May 14 at the Winged Foot Golf Club, Mamaroneck, N. Y., the date and place selected so as to coincide with the TGA Convention in New York.

Lou Brennersholtz of Yardley, Ltd. won the Cecil Smith Trophy; Burt Sauvageot of Hazel Atlas Glass Co., the B. M. Douglas Trophy; Peter L. Forsman of C. H. Forsman Co., The B. E. Levy Trophy; and M. Lynch of Park & Tilford, the Century Trophy, donated by the Canadian Association.

More than fifty other prizes were awarded at the tournament, in which some 250 industry representatives took part.

Rutgers Hon. Deg. to Hardt

Robert Andrew Hardt, vice president and director of Hoffmann-La Roche, Inc., received the honorary degree of Doctor of Pharmacy from Rutgers University June 6 at commencement exercises.

A graduate of the University of Nebraska, Mr. Hardt is president of the National Pharmaceutical Council, a past president and director of the American Pharmaceutical Manufacturers' Association and a member of many professional societies. He is the author or co-author of numerous books and papers on pharmacy and marketing.

BRIG. GEN. JOHN R. WOOD

Gen. Wood to Join B W & Co.

Brig. Gen. John R. Wood (MC) USA has been appointed vice-president and director of research for Burroughs Wellcome & Co. (U.S.A.) Inc., according to an announcement by William N. Creasy, president of the company. The commandant and director of the Walter Reed Army Institute, Washington, D. C., will take up his new appointment August 1 upon his retirement from the U. S. Army Medical Corps.

Prior to becoming commandant of the Institute, General Wood was chairman of the Medical Research and Development Board, Office of the Surgeon General. From 1945 to 1950, he was chief of the Medical Division, Army Chemical Center, and prior to that, director of medical research at Edgewood Arsenal, Maryland.

General Wood received his medical degree from the Medical College of Virginia in 1928 and was honored by the same university with the degree of Doctor of Science in 1946. While a staff member at the Army Medical School in Washington, D. C., from 1935 to 1939, he attended George Washington University and in 1941 received the M. A. degree in chemistry and biochemistry at Columbia University.

ROBERT A. HARDT

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Superior skill, artistry, creative imagination, knowledge of consumer preferences... these are the foundations on which a successful perfume or cologne is built. But... an aerosol fragrance requires even more.

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Joins American Alcolac

Owen G. Carpenter Jr., formerly assistant manager of the marketing department of Antara Chemicals Division, General Aniline and Film Corp., has joined the sales department of American alcolac Corporation. With territorial responsibilities for the New England States and Ohio, he will make his headquarters in the company's New York offices.

Lehn & Fink Appoints Mundy

Dr. Roderick A. Mundy has been appointed assistant director of research of Lehn & Fink Products Corporation, it has been announced by Edward Plaut, president.

Dr. Mundy will assist Dr. Robert A. Prindle, director of research and development, in general administration, and will supervise the laboratory staff and oversee completion of product research and development projects.

DR. RODERICK A. MUNDY

Conference Hears Ciba Head

"Planning the Research Program of a Pharmaceutical Company" was the topic of a talk by T. F. Davies Haines, president of Ciba Pharmaceutical Products, Inc., delivered before managers of industrial research departments who attended the Conference on Industrial Research, held June 11 to 15 at Arden House on the Harriman Campus of Columbia University, Harriman, N. Y.

Theme of the conference was the integration of research programs with other company operations. (The first installment of a two-part abstract of the talk begins on page 749 of this issue of DRUG AND COSMETIC INDUSTRY.)

The conference was under the direction of Robert Teviot Livingston, Professor of Industrial and Management Engineering at Columbia and former director of research for the Long Island Lighting Company.

Coty Appoints Nine

Six executives and three researchers have been appointed by Coty, Inc., according to Jean Despres, executive vice-president.

Robert Fenner and Carroll G. Grinnell, both formerly with Colgate-Palmolive, have been appointed assistant vice-presidents. John F. Donlen, also a former Colgate-Palmolive employee, has been named marketing research manager.

Appointed director of operations and planning is Joseph L. Packard, formerly assistant to the president of Warner-Lambert Pharmaceutical Company. Bertram Reibel, appointed director of merchandising, was formerly vice-president and director of merchandising for Richard Hudnut. Walter S. Joy, formerly with Shulton, Inc. and later an independent consultant, has been appointed art director.

R. J. Schachter, Ph.D. has joined the firm as pharmacologist and J. Clements, M.S. and Gabriel Barnett, M.S., as chemists.

Blair Research Coordinator

Norbert G. Berberich was recently named research coordinator for Blair Laboratories, according to an announcement by Dr. Robert Peterman, executive director.

Stewart Gets Hon. D.S.

Newell Stewart, executive vice-president of the National Pharmaceutical Council, received an honorary degree of Doctor of Science from the University of Arizona at commencement exercises held May 30 in Tuscon. Mr. Stewart was honored for his contributions in a number of fields during nearly 30 years of residence in Arizona, including a four-year period he served as mayor of Phoenix.

Dr. H. H. Guest Retires

Dr. Herbert H. Guest, director of research for the J. B. Williams Company, has retired after 44 years with the company. He is credited with solving key problems which plagued the soap industry. His accomplishments include overcoming spoilage created by foil wrappers, devising a workable method of mechanical drying of soap, and preventing the corrosive action of shaving cream on collapsible tubes. When perfume supplies were cut off during World War I, Dr. Guest synthesized new perfumes for Williams products.

Miss Kay Fitzpatrick, with the Toilet Goods Association since 1942 and assistant secretary since 1951, was recently elected executive secretary.

Ames Elects Officers

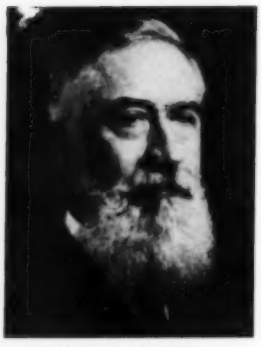
Officers of Ames Company, Inc., elected at a recent meeting of the board of directors, have been announced:

Walter R. Beardsley, chairman of the board; Charles F. Miles, president; George W. Orr Jr., executive vice-president; Walter A. Compton, first vice-president; Edward H. Beardsley, second vice-president; Edward L. Miles, vice-president in charge of advertising; Howard F. Christner, secretary; Charles R. VerBerkmoes, treasurer.

Mrs. Ramsey Heads Dept.

Mrs. Elizabeth Ramsey has been appointed head of the enlarged microbiological department of Leberco Laboratories, Roselle Park, N. J.,

H. George Wolfe, right, advertising manager of the chemical division of Merck & Co., Inc., receives from Robert E. Fellers, director of philately of the U. S. Post Office Department, the first copy of a new two-cent government post card on behalf of the United Postal Stationery Society at the recent Fifth International Philatelic Exhibition in New York City.



XAVIER GIVAUDAN

Xavier Givaudan Visits U. S.

Xavier Givaudan, chairman of the board of the Givaudan Corporation, arrived in the United States last month for a visit to the American associate company. The 90-year-old patriarch of the Givaudan organization, on his first visit to the United States in seven years, was accompanied by his son Andre.

Three generations of the Givaudan family have now witnessed current operations of the American associate, Leon Givaudan, son of Andre and co-director of Companhia Brasileira Givaudan, having recently spent several days in New York en route from Geneva and Paris to Brazil.

It has been about sixty years since Xavier Givaudan and his brother, the late Leon Givaudan, founded in Geneva the organization which today has plants in five countries.

Natl. Aniline Research Bldg.

Dr. Wesley Minnis, director of research and development of National Aniline Division, Allied Chemical & Dye Corporation, has announced plans for the erection of an addition to the division's research-engineering center at the Buffalo, N. Y. plant. The one-story structure, with its 10,000 square feet of floor space, will provide increased space for application research on diisocynates.

Promote Bird, Dufour, Olerich

Three promotions to vice-president have been announced by the Abbott Laboratories export subsidiary companies. Thomas S. Bird, formerly advertising manager of the export subsidiaries, is vice-president in charge of advertising. George C. Dufour has been promoted from production manager to vice-president in charge of production. B. A. Olerich, formerly treasurer, has been appointed vice-president and treasurer.

HARRY M. WILSON

CSC Appoints Harry Wilson

Harry M. Wilson has been appointed sales manager of the pharmaceutical chemicals department of Commercial Solvents Corporation, it has been announced by Thomas S. Carswell, vice president, biochemicals division.

Since joining the company in 1947 as a staff member of its Terre Haute, Ind. research center, Mr. Wilson has held a series of increasingly responsible positions, including that of administrative assistant to the vice-president in charge of biochemicals. He will continue to make his headquarters at the company's general offices, 260 Madison Avenue, New York.

Lederle Appoints Hensel

Robert H. Hensel has been appointed assistant domestic sales manager for Lederle Laboratories.

Eaton Veterinary Sales Div.

A veterinary sales division has been established at Eaton Laboratories, according to L. Eugene Daily, M.D., vice-president. The new division will handle promotion and sales of Eaton nitrofurans and other veterinary specialities.

The Eaton veterinary medical division, functioning for several years, consists of three graduate veterinarians, headed by Harold D. B. Roberts, V.M.D. Austin Laboratories, Ltd., Guelph, Ontario, will continue to distribute the Eaton veterinary line in Canada.

Medical Adv. Assn. '56 Slate

Dr. Arthur M. Sackler, president of William Douglas McAdams, Inc., has been elected president of the Association of Medical Advertising Agencies, Inc., it has been announced. Other elected officers are:

Robert Wilson, president of Robert E. Wilson, Inc. and Paul Klemtner, president of Paul Klemtner & Co., Inc., vice-presidents; Charles Lewis, vice-president of L. W. Frohlich & Co., Inc. treasurer; William Duryea, vice-president of McAdams, executive secretary.

Mack Joins Schering

Appointed to the pharmaceutical chemistry department of Schering Corporation is Richard John Mack, according to Robert E. Waterman, vice-president. The department is under the direction of Dr. Richard H. Barry.

Fragrance Foundation officers and directors at a recent luncheon. Seated, left to right, Russell Rooks, Avon; A. L. van Ameringen, president of van Ameringen-Haebler; Jack Mohr, general manager, Lentheric. Standing, left to right, Frazer V. Sinclair, editor of Beauty Fashion; J. S. Wiedhopt, chairman of the board, Roure-Dupont; Steve Mayham, executive vice-president, Toilet Goods Association; Joseph Danilek, Mary Chess; Jean Despres, executive vice-president, Caty; Ernest Durrer, Givaudan-Delawanna; Benson Storfer, Parfums Corday; Henri Costerg, Dana; Charles Bryan, Firmenich.

HANS M. F. FISCHER

Hans Fischer in New Post

Hans M. F. Fischer has been appointed assistant to W. Ward Jackson, vice-president in charge of Commercial Solvents Corporation's petrochemicals division. Formerly assistant to the general manager of the company's petrochemicals production department, Mr. Fischer succeeds Thomas Potter who has become associated with North west Nitro-Chemicals, Ltd., a CSC affiliated company at Medicine Hat, Alberta, Canada.

"Alamask" Cent. States Reps

Rhodia, Inc. has appointed Klenzade Products Company, Beloit, Wisc., as sales and service representatives for its "Alamask" industrial deodorants in the Central states. Klenzade specializes in pollution control chemicals for industrial operations.

Product Mgr. for Lysol

Richard S. Seclow has been appointed product manager for Lysol Brand Disinfectant, Edward Plaut, president of Lehn & Fink Products Corporation, has announced. Under the new product manager system, designed to improve efficiency, Mr. Seclow will assume responsibilities for coordination of all marketing activities for Lysol, including sales, advertising, merchandising, and sales promotion.

Pennsalt Technical Staffers

David S. Tillotson and Peter Pawlyk have joined the staff of the Pennsylvania Salt Manufacturing Company's technical division and have been assigned to its sales-service department under the direction of William M. Lee. Both will specialize in the technical applications of Pennsalt's new Isotron aerosol propellents and refrigerants which will be produced in a new organic fluorine plant scheduled for completion late this year in Calvert City, Ky.

Appointed by Cyanamid

Doctors Richard O. Roblin and Robert P. Parker have been named assistant general managers of American Cyanamid Company's pigments and research divisions, respectively, K. C. Towe, president, has announced.

Dr. Roblin, formerly assistant general manager of the company's research division, has been with Cynamid since 1934. He is the co-discoverer of sulfadiazine and played a major role in the development of Diamox, a non-mercurial diuretic used in combating edema.

Formerly director of research at the Pearl River Laboratories, Dr. Parker joined Cyanamid in 1933. As a chemist at the Bound Brook plant, he did considerable work in the fields of dyes and pigments.

Strong, Cobb Prod. Mgr.

Louis F. Mullick, appointed production manager of Strong, Cobb and Company, Inc., has reported to Michael A. Lauria, vice president and director of manufacturing, at the company's main offices in Cleveland, according to an announcement by John N. Eustis, president. Mr. Mullick was formerly vice president in charge of plant and production for Walker Laboratories, Mt. Vernon, N. Y.

Technical Service Advisor

J. Paul Nickerson has been appointed to the newly created position of technical service advisor in the marketing division of Dr. Salsbury's Laboratories, Charles City, Iowa.

Dr. Herman Pines, right, whose contributions to terpene chemistry involving, among other things, the applications of catalysis to terpene reactions and studies of pyrolytic reactions of terpenes gained for him the Fritzsche Award, is here shown receiving the Gold Medal and $1,000 from Fritzsche Brothers' representative, Russell E. Bull, at the recent Dallas Meeting of the American Chemical Society, sponsors of the international award.

SABBAT J. STRIANSE

Strianse Shulton's Res. Dir.

Sabbat J. Strianse has been appointed director of research for the toiletries division of Shulton, Inc., according to an announcement by George L. Shultz, president of the company. Mr. Strianse will head up all toiletries research and development for domestic and international markets and development of proprietary pharmaceuticals.

President-elect of the Society of Cosmetic Chemists and a member of the American Chemical Society and the New York Academy of Sciences, Mr. Strianse, prior to joining Shulton, was technical director of Vick Chemical Company's Sofskin division.

Stragnell-Lee Hdq. in LA

The newly formed pharmaceutical firm of Stragnell-Lee, Inc., has established headquarters in Los Angeles, branches in New York and Chicago.

Dr. Gregory Stragnell organized the Schering Corporation in 1929 and served as executive vice president in charge of clinical research for a number of years. During World War II he was in charge of Heyden Chemical Corporation's penicillin plant. Following the war he became president of Organon, which position he resigned in 1951 to become assistant to the president of American Home Products.

The other principal, Raymond Lee, is president of Lee Limited of Beverly Hills, distributors of Sof-Set, Dri-Mist and Courtley products.

Stragnell-Lee, Inc. will develop ethical pharmaceutical products for distribution through drug wholesalers.

Union Pharm. Adv. Head

Named head of the advertising department of Union Pharmaceutical Co., Inc., Bloomfield, N. J., is Alan B. Cowley, who will be associated directly with Max A. McDaniel, vice president and general manager of the company.

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stocks carried in principal cities

Cullen Joins Strong, Cobb

Frederick J. Cullen, M.D., recently retired as executive vice-president and medical director of the Proprietary Association and formerly chief of the FDA's Drug Control Division, has joined Strong, Cobb & Company, Inc. as medical director, according to an announcement by John N. Eustis, president of Strong, Cobb.

Doctor Cullen will make his headquarters in Washington, D. C. Besides serving Strong, Cobb, he will be available to the Proprietary Association and others as medical consultant.

Dorothy Gray Appointments

A. John Bender, Jr. has been named assistant sales manager of Dorothy Gray, Ltd., and Jack H. Keene, sales representative in Michigan, according to an announcement by James M. Boohecker, general manager.

Voorhees, Budd Back in U. S.

Kenneth G. Voorhees and Ivon H. Budd, president and first vice-president respectively of Ungerer & Company, Inc. have returned from Europe where they visited the Ungerer-Vidal-Charvet office in Paris and several of the firm's European sources and customers.

Name Mittleman Mkt. Mgr.

M. Budd Mittleman has been named marketing manager of Schenley Laboratories, Inc. according to R. Blayne McCurry, president, who said that Mr. Mittleman will continue as advertising manager, a post he has held for the past three years.

Mr. Mittleman will be responsible for the company's sales planning program, development of personnel recruitment and training, analysis of distribution and marketing procedures, and integration of advertising and promotional activities with the field selling program.

M. BUDD MITTLEMAN

Mrs. Samuel Isermann, president of Van Dyk & Company, Inc., is seen at Tucson, Ariz., during her recent stay there enroute to the West Coast.

Winthrop Asst. Control Dir.

John F. Gain Jr. has been appointed assistant director of control at the principal manufacturing plant of Winthrop Laboratories, Dr. Theodore G. Klumpp, president, has announced.

Mr. Gain, who came to Winthrop in 1946 as assistant head of the bacteriological control laboratories and has been in charge of these laboratories since 1948, will assist Irwin S. Shupe.

Asst. Adv. Dir. of B-M

Richard K. Van Nostrand, advertising manager of Bristol-Myers Products Division, has been appointed assistant advertising director, according to an announcement by Donald S. Frost, vice president in charge of advertising. John R. Cookson has joined the division as an advertising manager and will handle advertising of Minut-Rub, Mum Mist and Ammens Powder.

On Vick Planning Board

D. D. Conkwright and E. B. Newsom have been appointed members of the planning board, Vick Products division, Vick Chemical Company, it has been announced by Kirby Peake, president. Mr. Conkwright has been sales promotion manager of the division since 1948. Mr. Newsom was promoted to sales manager in 1953.

Squibb's Theragran Liquid

Squibb has announced the availability of Theragran Liquid. One teaspoonful of this fruit-flavored solution is the equivalent of one Theragran capsule, the announcement states. It comes in four-ounce bottles with one-year out-date

Harvey Manss Retires

Harvey M. Manss, head of the Bayer Company division of Sterling Drug, Inc. for almost 20 years, has retired as a vice - president of Sterling, having reached the mandatory retiring age of 70, according to James Hill Jr., chairman of the board, who also stated that Mr. Manss was re-elected May 5 as a director, an office he has held since 1941.

Joining the Bayer division in 1930, Mr. Manss was appointed sales manager in 1932 and vice-president in 1934, elected president of the division in 1937 and vice-president of Sterling in 1941.

He helped plan Sterling's National Brands division, established six months ago.

Barnett Is Rexall V.P.

James A. Barnett, vice-president of Lever Bros. Company, has been named vice-president of Rexall Drug Company, according to an announcement by Justin Dart, president of Rexall. Mr. Barnett will assume his duties in Los Angeles at Rexall's main office.

Dir. of Mnfg. for Norwich

Alexander C. Fernandez has been appointed director of manufacturing of the Norwich Pharmacal Company, George W. Bengert, president, has announced. Mr. Fernandez, who succeeds the late Norman J. Burd, had been production control manager.

Lindley Is Asst. Mdse. Mgr.

Samuel E. Lindley, former field sales manager, Eastern region of Colgate-Palmolive's Kay Daumit division, has been appointed assistant merchandise manager in the toilet articles division. He also has been named to the newly created position of brand merchandising manager for all Lustre-Creme products manufactured and sold through the two divisions. Douglas C. Donley succeeds Mr. Lindley as field sales manager for the Eastern region of Kay Daumit.

SAMUEL E. LINDLEY

Why you should use 'ROCHE' THIAMINE

HYDROCHLORIDE AND MONONITRATE

(vitamin B_1)

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1. **U. S. P.** Both 'Roche' thiamine hydrochloride and mononitrate equal or exceed U. S. P. specifications.

2. **TWO TYPES.** Roche has *two types* of thiamine hydrochloride available for you:

   - **Regular**—*for tablets, capsules, dry and liquid nutritive supplements and multivitamin preparations.*
   - **Ampul**—*specially prepared for use in manufacturing parenteral solutions.*

3. **SPECIAL PROBLEMS.** Roche has thiamine mononitrate to help you meet unusual stability problems which can occur in dry cereal or pharmaceutical products. Also it may have advantages in certain pharmaceutical products where the pH range is above the safe level for the hydrochloride.

4. **STEADY SUPPLY.** Because Roche makes *quality* thiamine by the tons, you can be sure of a steady, *quality* supply.

5. **RESEARCH.** Continuing world-wide research brings you the latest developments in vitamin knowledge.

6. **PRODUCTION CONTROL.** Scientific production control assures you of consistent, highest quality.

7. **QUICK DELIVERY.** Every order receives prompt careful service from convenient points. Transportation at lowest rate allowed and prepaid to destination. Special routings at cost. And you *know* you can count on our promises.

8. **PACKAGING.** Packed in polyethylene bags in ½ and 1-kilo tamper-pruf metal containers and in fibre drums up to 20 kilos for the hydrochloride, 35 kilos for the mononitrate. Small quantities in amber S.C. bottles. *Ampul type* thiamine hydrochloride is sealed under inert gas in 100 gram S.C. bottles and in ½ and 1-kilo tamper-pruf metal containers.

9. **KNOW-HOW.** Roche know-how on vitamins can help you with solutions to compounding and packaging problems.

10. **SAMPLES** and technical assistance are yours on request. Ask your Roche salesman or write the Vitamin Division.

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In Canada: **Hoffmann-La Roche Ltd., 286 St. Paul Street, West; Montreal, Quebec**

HAROLD C. GREEN

H. C. Green Is Vice-Pres.

Harold C. Green, in charge of the Eastern office of Strong, Cobb and Company, has been elected a vice-president.

Promoted by Schering

John Kuntz has been named acting manager of Schering Corporation's production control department, and Richard Peters, assistant manager, according to Dr. August Ryer, production manager.

Polak & Schwarz Labs Mgr.

Polak & Schwarz, Inc. has announced the appointment of Charles H. Grimm as manager of the New York laboratories for flavor and essential oil research. With Polak & Schwarz for the past two and a half years, he has been associated with the industry for more than twenty years.

He has worked with a sub-committee of the United States Pharmacoepia and National Formulary in revising many monographs on flavoring ingredients and essential oils, and he was a technical consultant to the United States Customs Office on incoming flavoring ingredients, essential oils and spices. In 1938, he discovered alpha and beta citral in California cold pressed Orange Oil and proved the presence of this aldehyde in the oil.

CHARLES H. GRIMM

Mme. R. Grant to Brandeis U.

Madame Helena Rubinstein has given $100,000 to Brandeis University, Waltham, Mass., it was announced at the sixth annual dinner dance of the Drug and Cosmetic Industry. Designated for the establishment of a Chair of Biochemistry in the Hayden School of Science, the check was presented to Dr. Abram L. Sachar, president of the University, by Oscar Kolin, vice-president of Helena Rubinstein, Inc., Madame Rubinstein being in Europe.

Bymart-Tintair Officers

Martin L. Strauss II has been re-elected chairman and president of Bymart-Tintair, Inc., the company's board of directors has announced. Norman Lewis has been named executive vice-president and treasurer.

Other officers re-elected were Harold B. Wasserman, Anthony J. Esposito and A. Mitchell Finlay as vice presidents and Francis C. Reed as secretary. Louis L. Brizel is chairman of the executive committee.

Vick Names Three

Thomas H. Dunkerton has been promoted to manager of consumer research and T. M. Poole to manager of special studies, Kirby Peake, president, Vick Products Division, has announced. Eugene G. Holland, formerly product director (U. S.) and export manager of Ortho Pharmaceutical Corporation, has been appointed assistant new products director for Vick, according to Mr. Peake.

Kern Asst. Dir. of Control

Stanley F. Kern, Ph.D., has been named to the new position of assistant director of Eli Lilly and Company's control division. W. B. Fortune, Ph.D., is director.

Dr. Kern, a member of the Lilly research staff for almost ten years, joined the company as a physical chemist and has since served as a research associate, department head of chemical development, and staff assistant to the director of the control division.

New Product Mgr. for Kreml

James A. Field is the new product manager for Kreml hair preparations, it has been announced by John E. Grimm, marketing vice-president of the J. B. Williams Company.

RAPHAEL COHEN

Raphael Cohen Promoted

Raphael Cohen's promotion to the newly created position of manager of laboratory products has been announced by Edmund R. Beckwith Jr., vice-president in charge of marketing and administration for Warner - Chilcott Laboratories. Creation of the new post is another effort in the company's continuing program of diversification. Mr. Cohen will be responsible for all developmental and marketing activities related to the laboratory supply division.

Joins Warner-Lambert

Philip A. Singleton has joined Warner-Lambert Pharmaceutical Company as vice-president of the Pro-phy-lac-tic Brush Company, a Warner-Lambert subsidiary, it has been announced. He was with the Monsanto Chemical Company for the past 15 years, most recently as assistant to the president.

Arner Co. Plant Manager

Anthony Iacono has been appointed plant manager of the new Long Island City packaging plant of the Arner Co., Dr. Niels C. Klendshoj has announced. A graduate pharmacist, Mr. Iacono previously was associated for 19 years with E. R. Squibb & Sons, where he was manager of the packaging division.

ANTHONY M. IACONO

Does HEYDEN HEXAMETHYLENETETRAMINE

Fit into YOUR process picture

SYNTHETIC RESINS
(Curing Agent)

MODIFIED PROTEINS
(Hardening Agent)

RUBBER
(Accelerator)

EXPLOSIVES
(Nitration Intermediate)

FUEL TABLETS
(Non-luminous flame)

MEDICINALS
(Antiseptics; intermediate)

PESTICIDES
(Weak base or buffer)

PETROLEUM PRODUCTS
(Buffer in catalyst manufacture. Phenolic complex former)

The unique physical and chemical properties of Hexamethylenetetramine have resulted in extensive and varied applications in industry. This versatile intermediate can serve as a tertiary amine or, when desired, react like formaldehyde. Many of its newer applications depend on its ability to act as a weak base or buffer.

Do you have a new application or a current process in which Heyden "Hexa" can be of help? If so, feel free to call upon our technical service department for assistance in choosing the proper form and grade to meet your requirements.

For the complete story, ask your Heyden representative, or write direct, for a copy of the new Technical Bulletin HEXA 1-55.

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Winn Honored by Vt. College

Thomas J. Winn, vice-president and director of Chas. Pfizer & Co., Inc., delivered the commencement address June 4 for St. Michael's College in Winooski Park, Vt. and also received an honorary doctoral degree from the college.

General manager of Pfizer Laboratories, Mr. Winn has played an important role in the company's transition from a bulk supplier of drugs and chemicals to a leading pharmaceutical firm.

Appointed by Conn. Chemical

Appointment of Milton Schwarz as director of sales and product development for the Connecticut Chemical Research Corporation, Bridgeport, Conn. has been announced by A. O. Samuels, president. Formerly technical director and assistant to the president of the Turner-Hall Corporation, Mr. Schwarz was with that company for ten years, supervising development and manufacture of a wide variety of hair and cosmetic products.

Matchabelli-McKelvy Changes

William P. Jeffery Jr. has been appointed assistant general manager, Paul P. Woolard, general sales manager, and Clarke C. Hambley, merchandise manager in charge of packaging, advertising and promotions, for Matchabelli-McKelvy, the new firm formed by the recent merger of Prince Matchabelli, Inc. and the A. D. McKelvy Company. The appointments were announced by Owen Stoner, newly elected president of Matchabelli-McKelvy.

Reidy with De Laire

Thomas J. Reidy, formerly with Shulton, Inc., has been engaged as sales representative by De Laire, Inc. His appointment is related to the De Laire expansion plan, according to an announcement from the company.

THOMAS J. REIDY

Anchor Hocking Warehouse

A modern type steel and concrete warehouse is under construction at the Salem, N. J. glass container plant of Anchor Hocking Glass Corporation, according to an announcement by William V. Fisher, president. Scheduled for August 1 occupancy, the new warehouse will provide an additional 40,000 square feet of storage space.

Hoffmann-La Roche Appoints

Robert W. Smith's appointment as sales manager of the Hoffmann-La Roche bulk vitamin division has been announced by Paul J. Cardinal, vice-president in charge of the division. Ralph C. Christiansen has been promoted to special markets manager. Richard D. Zucker, assistant to the vice president since 1953, and who retains that title, will devote increased attention to direction of sales control.

Chemway Starts Construction

Chemway Corporation has begun construction of a multi-million dollar development for executive and administrative offices and research and production laboratories on a plot of 167 acres on Fairfield Road, Mountain View, N. J. The 80,000 square foot plant is being built in a park-like setting. More structures will be added later to provide for expansion in business.

Plan M-J de Mexico Bldg.

Mead Johnson & Company has announced plans for construction of a building in Mexico City to house the manufacturing, warehousing and office facilities of Mead Johnson de Mexico, S. A. Completion is scheduled for Fall.

Charles G. Merrell

Charles G. Merrell, 89, former president and chairman of the board of Wm. S. Merrell Company, died May 19 in Bryn Athyn, Pa. President of Merrell from 1914 to 1937, he retired as chairman in 1943.

Edwin P. Nicholson

Edwin P. Nicholson, sales representative for Givaudan-Delawanna, Inc., Givaudan Flavors, Inc. and Sindar Corporation in the New York-New Jersey area, died May 24 at the age of 57 after almost five months of illness.

Associated with the aromatic chemical, perfume and related industries for 36 years, Mr. Nicholson last year celebrated his twenty-fifth anniversary with the Givaudan organization.

He is survived by his wife, three daughters and a grandchild.

NORMAN J. BURD

Norman J. Burd

Norman J. Burd, 46, vice-president and director of manufacturing of Norwich Pharmacal Company, died suddenly May 11 of a cerebral hemorrhage at the Broward General Hospital, Ft. Lauderdale, Fla. He had been in Florida on vacation.

Born in Canastota, N. Y. where his father was a Baptist minister, he lived in Hamilton, N. Y. much of his life and attended high school there. A graduate of Colgate University '31, he joined Norwich in 1945 as personnel director after working several years in the personnel department of Republic Service Electric & Gas Company, Newark, N. J. He was appointed director of manufacturing and elected vice-president in 1952.

He is survived by a daughter, Elizabeth.

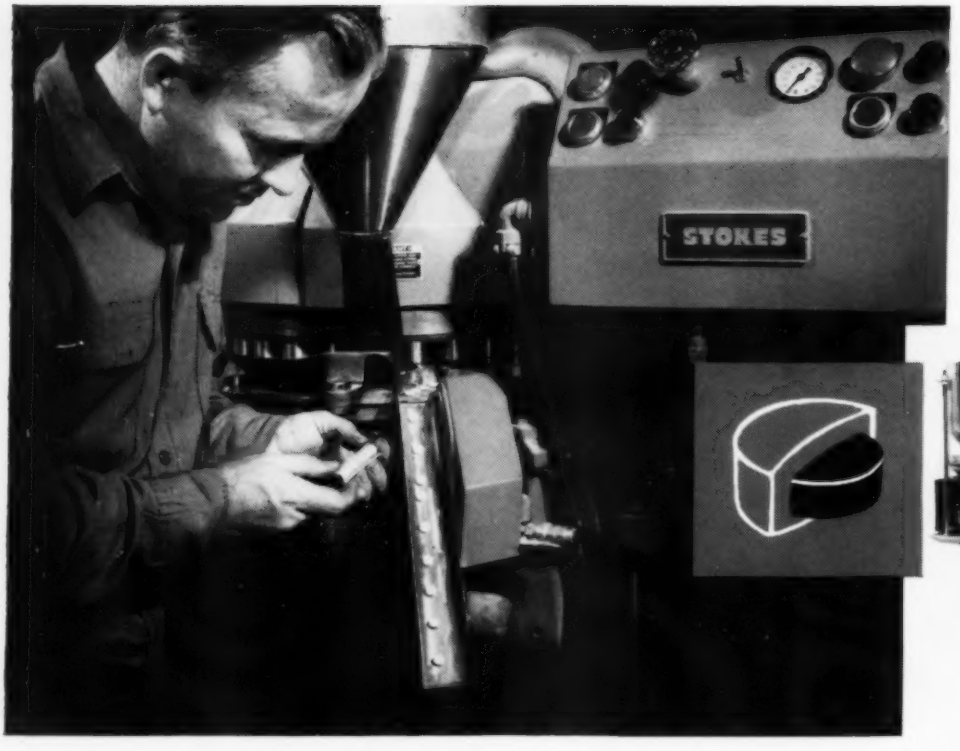
Hilton F. Snider

Hilton F. Snider, 85, former president and general manager of the R. J. Strasenburgh Co., Rochester, N. Y., died May 15 in Rochester after a short illness.

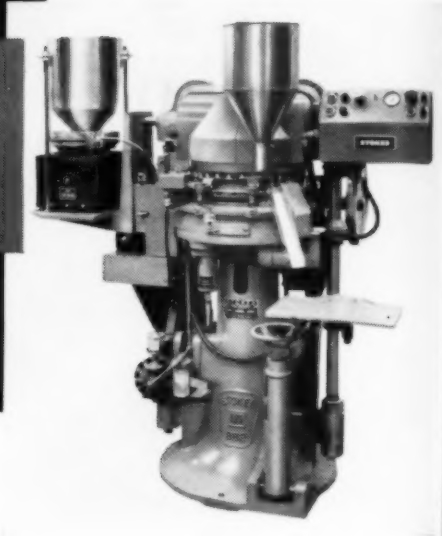
Born in Kingston, Ontario, Mr. Snider came to the Rochester area with his family in 1880. After working in drug stores, he became associated with Mr. Strasenburgh in 1927, and seven years later they formed the R. J. Strasenburgh Co., with Mr. Strasenburgh as president and Mr. Snider as vice-president. When Mr. Strasenburgh died in 1927, Mr. Snider became president and general manager, positions he held until his retirement from active business in 1937. He remained a director until his death.

Mr. Snider was active in the American Pharmaceutical Manufacturers' Association during its formative years.

He is survived by a daughter, Mrs. Weldon Crossland and a son, Ellwood H. Snider, who is associated with the Strasenburgh Co.



Press-coated tablets, made to close tolerances, are produced at economical rates on the new Stokes Machines. Large photo shows tablets being ejected from the machine.



Put your new product ideas to work with new Stokes press-coating machines

Press-coated or dry-coated tablets can now be manufactured to a high level of uniformity and precision, on the new Stokes press-coaters. These machines make tablet-within-a-tablet structure commercially practical, opening up broad possibilities for unique products . . .

. . . for applying coatings where water cannot be used.
. . . for combining incompatible materials.
. . . for producing heavy or time-delay coatings at low cost.
. . . for making multiple-dosage tablets.

The machines produce tablets consisting of a core surrounded by an accurately controlled layer of compressed dry material. Core tablets, as made on a standard press, are hopper fed to the press-coater. The machine first fills the die volumetrically with a portion of the coating granulation. Then a core tablet is accurately centered in the die cavity, the remaining coating material is filled in, and pressed to required density.

These operating features assure dependable, uniform production:

. . . Core tablets accurately centered.
. . . Easy set-up and changeover of core size or coating.
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For complete specifications, and for a consultation on your own tabletting problem, contact your nearest Stokes office. Ask about the Stokes Advisory Service, which can provide valuable help on many pharmaceutical production problems.

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STOKES

Management Forum

by Francis Chilson
INDUSTRIAL CONSULTANT

Machines Over Men

This is the title of a book published in 1939 by Raymond F. Yates. It is a perfect example of the importance of a name. Had Yates thought of the word "automation" the book would have been a best seller. The closest he came to it was "automatism."

The book deals with automation from automatic pilots to digital computers, then only recently invented. Did you know that, that far back, a lot of work had been done on machines that would obey voice commands? Did you know that an automatic typewriter had been developed that will type as you talk to it? The machine never reached the market because too many English words sound alike, although they have different meanings. To use the machine successfully would have required creating a special vocabulary. In any case the machine would have been a flop with or without a special vocabulary for many executives can't dictate a simple three paragraph letter to their secretaries without making one or more mistakes and fewer still can dictate directly to typists.

If automation served no other purpose, it did bring to the consciousness of the public, the importance to our economy and national safety of machines that, not only will guide other machines in a multiplicity of tasks, but will perform in seconds non-mechanical functions such as mathematical computations that would require skilled mathematicians months to work out.

Anyway the machines are here; we live by them and we may die by them.

Writers, poets and philosophers for one reason or another were always afraid of the influence of machines upon the human mind and upon human arts. Few of them ever really understood machines. Writing at the dawn of the industrial age, Ruskin thought railway and other engines were aesthetically repulsive. He thought all engines should be dolled up with gargoyles and other Gothic trappings. Ruskin didn't foresee simple, graceful modern design of which the new Stokes tablet press is a good example.

William Morris thought of machines as inimical to the instinctive artistry of humankind as expressed in handcrafts. He thought men would be turned into servile brutes by machines. He wanted to return to the guild system. He was like Miniver Cheevy in Edwin Arlington Robinson's poem who, "Liked the medieval grace of iron clothing." Morris ignored of course, the sixteen hour work day of the guilds; he forgot about the dirt, the stink, the lice, the disease and the short lives of the medieval handcraftsmen. It is easy to apotheosize the other guy's life if you have never lived it under the same circumstances.

Ghandi thought that salvation for humankind lay in working with one's own hands, but India, to whose freedom Ghandi so largely contributed, is industrializing as fast as she can.

Tolstoy was sure machines would destroy men's souls and would increase the spread of tyranny among men. (He may have had a point there.) In our own time John Steinbeck expressed fear that the continuing spread of mass machine production will eventually seep into our souls so that we are in danger of thinking mass thoughts, thereby losing both our originality, our souls and our liberties as well. In reality, however, machines have given men time to think if only they will try to do so.

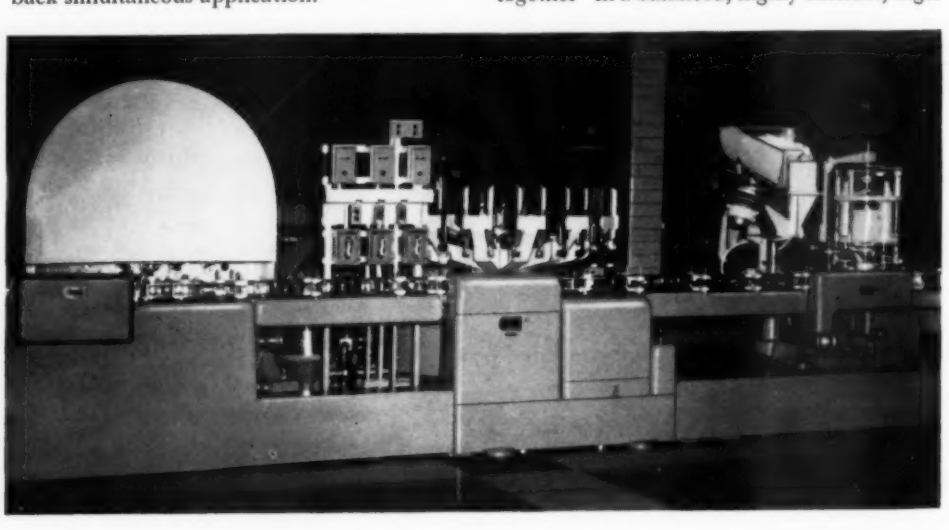
Writers of the Ruskin, Morris, Tolstoy, Steinbeck variety suffer mechanophobia. They insist without making direct comparisons, that the products of the old handcraftsmen were essentially works of art, whereas, the fact is that a trip to any museum to inspect the products of the old handcraftsmen will show that by comparison with their modern machine-made counterparts, the hand-made products are crude and lacking in utility. Moreover the products of the guild craftsmen were damned expensive; only

MENNEN MAKES BOTTLING EASY-

with PNEUMATIC machines

"made for each other"

WHAT MENNEN's got is close to automation — a conveyor synchronized Pneumatic bottle cleaner, filler and capper! Capable of handling open-mouth as well as all glass sprinkler top bottles and the most delicately molded closures, it terminates in a fully automatic labeler capable of front and back simultaneous application.



A synchronous drive keeps the three machines, cleaner, filler and capper "in step" and in exact synchronism. The bottles pass from cleaner to filler and filler to capper without a hitch, and on spaced centers beyond the cleaner discharge.

Rounds, rectangles, or oval bottle sections are handled with ease. The capper is equipped with Sterling Cap Feeder especially designed for positive feeding without ever a possibility of breaking or marring.

The capping machine is equipped with sensitive chucks pre-set to any desired tension and this tension is maintained in day in and day out production.

The filler will fill light and heavy liquids equally well, alcoholic as well as oil base. It is designed for quick and thorough cleaning between fills on different products.

All of the equipment is designed to "go together" in a balanced, highly efficient, high productive rate unit. The brilliantly cleaned containers are exactly filled to the same height without dripping or messy spillage, screw caps are accurately and positively applied and the labels beautifully adhered to the containers without muss or misregistration. We'll gladly mail technical bulletins on any or all of this equipment — just write.

PNEUMATIC SCALE CORP., LTD., 70 Newport Ave., Quincy 71, Mass. *Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto.*

★PNEUMATIC *Packaging and Bottling Equipment*

the rich could afford them. Everybody else did without.

Without machines the present world population could not be fed. With machines we soon will see the end of famine everywhere.

It cannot be denied however that as machines take over more and more human activities and become in consequence more complicated and expensive, they inevitably as Tolstoy foresaw increase the economic and controlling power of those organizations which have sufficient capital to purchase them, namely, the large corporations, the state and the federal governments.

Such machines do increase enormously the power of governments over men. Through mass data handling machines, our finger prints, our birth data, our personal incomes, our personal possessions (though census statistics) have all been tabulated. Each of us is now some kind of statistic. We are fenced in.

Just as technology has increased the economic power of modern distributism so has it also increased the cost and fire power of modern military weapons. Technology has taken the power of a man to defend his rights when legal means have failed out of his hands and placed his future in the hands of his government. No longer can people, seeking redress against tyrannical governments, rebel against their rulers. The rulers have the firepower. Consider the recent history of Italy, Germany and Russia. The regimes in Italy and in Germany could never have been overthrown by their own people. That required the fire power and the economic strength of alien forces. Without the support of their army the Russian people can never rebel against the communist tyrants by whom they are ruled. The tyrants control the means of production, the machines and the weapons and through control of education and all communications, man's minds as well.

In recent years we have seen in South America, how military juntas, controlling the weapons and the men trained to use them, have rebelled not only against their governments, but their own people.

Time was, as in our own revolution and in our own Civil War, the weapons in the hands of governments weren't any better than those in the hands of the rebels. Our colonial rebels, who had had to live by the musket, were much better shots than the beef eaters and Hessians who were sent over to subdue them. So we won our independence and our personal liberties. But suppose John Bull had had machine guns, tanks, automatic rifles, planes and bazookas then? We'd still be bloody British colonials. In our Civil War it wasn't the superiority of Northern equipment or better fire power that brought the Confederacy to its knees, but overwhelmingly more of it, supported by superiority in numbers and an industrial plant that was growing rapidly in spite of the demands of war.

In improving our machines we have, without realizing it, given up the power to rebel against any government, elected or otherwise, which might choose to utilize existing military forces to destroy our rights as free men. Thus dangerous power resides in the hands of our elected Federal government. Without realizing what we were doing, we have given our federal government, controlling power over transportation, through rate and other regulations; we have given it power over communications of every kind; we have given it control over power distribution and development; we have given it unimaginable power over our daily lives through the taxing authority we have vested in it.

And the routine work of our government is carried on principally by bureaucrats or appointees who are not elected by the people at all. It makes you shudder!

It makes you shudder to think that through the stupidity, connivance or incompetence of our national and state department politicians we could be forced against our wills into a war that might destroy your life and mine and our families' welfare forever.

To control the invincible power we have given our government, we must forever retain full civilian control of all military forces and in particular, weapons and military supplies. We haven't it now really but we should strive to get it.

We must be ever mindful of the necessity of maintaining the freedom of the press because it is mainly through the snooping of journalists in the quest for stories that treason and corruption, stupidity and connivance are brought to light. For the same reason we must maintain a powerful opposition party.

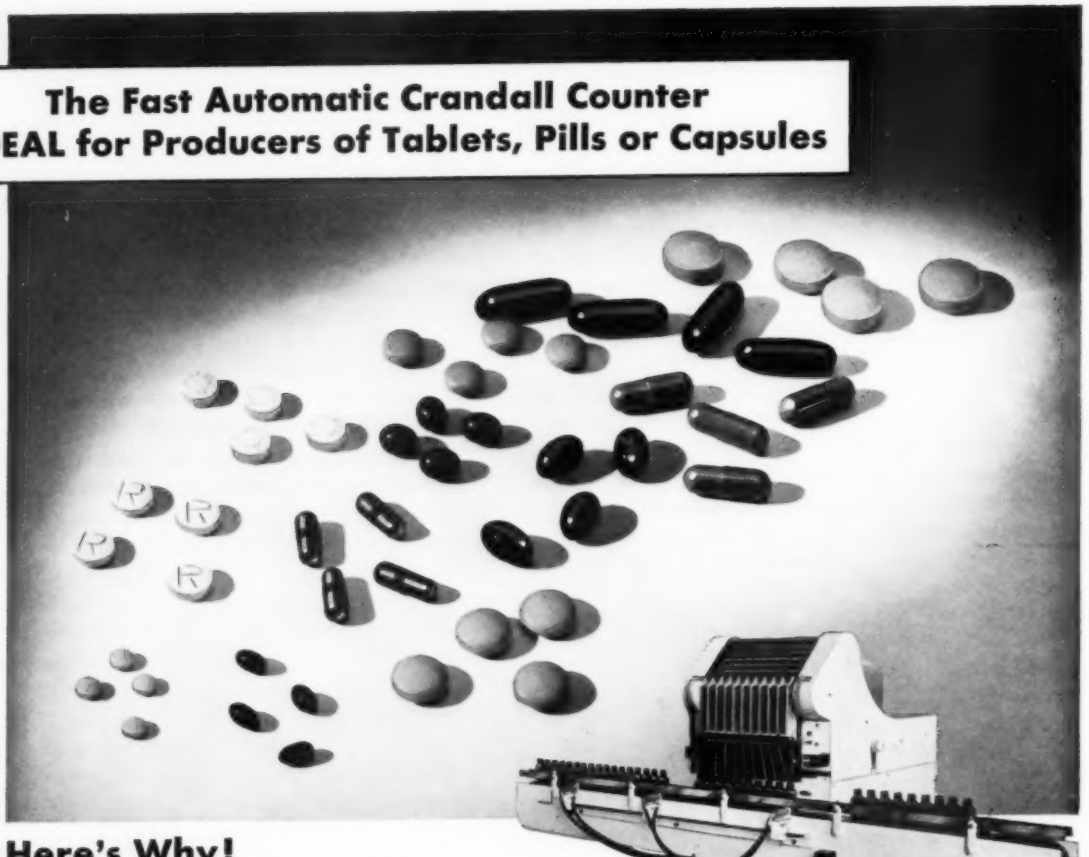
All this eternal vigilance is imposed upon us because we made the machines, which, in the hands of incompetent, dishonest or tyrannical governments, could destroy our liberties and our very lives.

The Rich Swiss

Most of us think of Switzerland as the land of watches and tourists. But did you know that Switzerland is one of the richest countries in the world? I read that it ranks next to the United States. When you think of the paucity of natural resources in Switzerland—apart from scenery which you can't package and export—it is difficult to believe that such a tiny land locked nation could be so rich. But it is. Many great industrial corporations in the pharmaceutical, electrical, chemical and food business are owned or operated from Switzerland. We have no monopoly on great corporations. There are several in Switzerland whose sales surely pass the half billion dollar mark annually. Brown Bouverie is one. Nestle in all its divisions did much more than a billion dollars last year throughout the world—so I was told by a man who is very close to the inner circle.

But apart from her great international industries, the reason why Switzerland is so rich—and the principal reason why she will always remain secure in her enfolding mountains—is that Switzerland is the de-

The Fast Automatic Crandall Counter is IDEAL for Producers of Tablets, Pills or Capsules



Here's Why!

The Crandall . . .

1. handles practically all types of coated or uncoated tablets, pills and capsules
2. can be equipped for any count
3. handles bottles, cans or cartons
4. runs at speeds up to 60 bottles of 100-count per minute—faster where counts are lower
5. can be equipped for automatic or semi-automatic operation

The original Crandall Tablet Counting Machine is manufactured *only* by **US.**

. . . and here is an important added feature—

The Crandall can handle several different products simultaneously. By dividing the hopper, the Crandall can count several products at the same time. Thus, if you are making small volumes of a variety of products, you can set up the Crandall to suit your exact requirements with a minimum of effort.

Full details are yours for the asking. Write today.

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Carton Sealing, Lining,
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pository for all the individual rich industrialists, crowned heads, dictators and multimillionaires throughout the world, just as we are bankers for all the governments of the world.

Where do you think King Farouk cached the twenty million in gold he is known to have stolen from Egypt before he was deposed? Switzerland of course—not under his name obviously but under a number or a dummy's name. And the Swiss don't tell. Where do you think Peron has his millions cached away? Same place. There is no doubt that all the big-wig Nazis had hoards deposited in Switzerland just in case. I shouldn't be surprised that all the big-wig Communists are doing the same thing right now. When the going got tough in World War I, German industrialists provided for the future by loading the Swiss banks with secret accounts.

Recently Fortune had a long article about the resurrection of the Krupps in Germany. Twice within fifty years this great industrial empire was smashed; the second time worse than the first. Fortune describes how the Krupp plants were bombed to smithereens; how the plants—what remained of them were dismantled after the war. How the Krupp cartel was dismembered; how the head of the empire, Alfried Krupp von Bohlen und Halbach was thrown into jail for six years as a Nazi collaborator; how he was sprung by McCloy and how he came back to rebuild all over again. And now Krupp with his decartelized—so-called—divisions is back to a sales volume of almost three quarters of a billion dollars. Fortune tells the whole story except:—where did he get the money to rebuild so quickly and on so vast a scale? Switzerland of course. Beyond doubt he had a hoard buried in this tight little country long before the shooting ended. Certainly he didn't have it in the German banks, all of which were commandeered if not looted by the Allies, to pay damages and reparations; certainly he didn't have it tucked under his bed in prison.

Along with the Germans, French businessmen for years have looked to Switzerland to hold their money safely—especially the money they otherwise would have had to pay to the French government in taxes. I was told in Paris by the president of a big French chemical company that if it had not been for the money his firm had deposited in Switzerland, they would have been in a bad way when the capital levy took place in France several years ago. Of course the French government didn't know about these Swiss deposits and the Swiss don't tell. That's why they are rich.

Warehousing and Material Handling

The ideal way to build a factory is to build a single unit—assuming of course your products and processes permit that—but we have reached a time now where construction costs are so high that to use first class construction for the warehouse section—and that usually averages sixty per cent—is too expensive. One alternative is to use common internal construction and walls of metal or Transite for the warehouse section. Such panels can be removed later when the warehouse is absorbed for manufacturing and packaging purposes. Another is to use pre-fab buildings set apart from the main operating building. Depending upon the distance apart and the floor levels such a plan may involve substantial increases in material handling cost.

In any case the proper procedure is to reduce aisle widths and the number of aisles to a minimum and to increase stack heights to a maximum. Several years ago I pointed out how you can block off solid stacks of material that is not in current use with appropriate access aisles and then fill the access aisles. This can be done with materials that are purchased in the spring for summer use or assembly; it can be done when you are running up finished stocks in anticipation of a big sales drive.

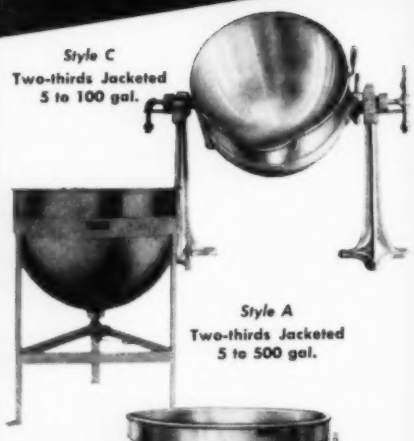
You also can use straddle trucks with stand-up driver arrangements and reduce aisle widths from ten or twelve feet to six. These trucks are available with telescopic booms and lifting capacities up to 3000 pounds.

You can cut space wastage by adopting an index system in which each pallet is identified and numbered as it is loaded. Tags with corresponding identification and numbers are cross indexed in the warehouse and in the production planning department. This enables you to put three or four different items, into one stack. When a particular pallet is needed the driver is given a ticket from the warehouse index which shows bay number and stack number. If the pallet he wants is at the bottom of the stack the driver picks the entire stack up sets it in the aisle; then he removes the upper pallets and puts them back; finally he picks up the remaining pallet and goes off with it. This system works very well. But you must keep your stacks high and, if your goods wont stand the weight, it is a good thing to use bin pallets or some form of racks. Racks have the advantage of making every pallet accessible but they waste aisle and also cubic space when the pallets handled vary considerably in height. In any case the racks are expensive and are necessarily confined to fixed positions.

Now I want to discuss with you a new idea of mine which eliminates the pallets and the aisles altogether. I haven't tried this yet and I'd like your reaction to it. Briefly I propose to replace pallets with cargo nets or canvass slings and to stow loaded pallets as a cargo ship is stowed—from the top. This could best be done in a new building of course. Let me say beforehand that such a method would require the same sort of indexing system described above.

Visualize if you will a warehouse building forty feet from floor slab to roof slab. The spans in this building would be 100 feet by 25 feet. In each 100 foot bay there would be a traveling crane and cab arrangement

COOKING KETTLES

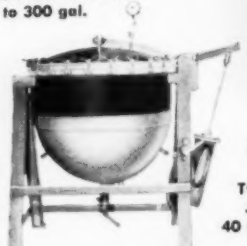


Style C
Two-thirds Jacketed
5 to 100 gal.

Style A
Two-thirds Jacketed
5 to 500 gal.

Style B
Full Jacketed
10 to 300 gal.

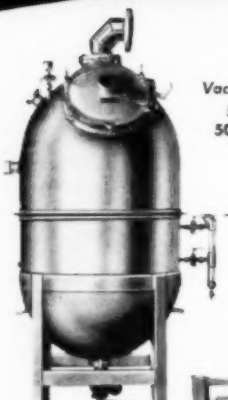
Style CW
Two-thirds Jacketed
80 to 300 gal.



Pressure Kettle
Two-thirds Jacketed
40 to 200 gal.

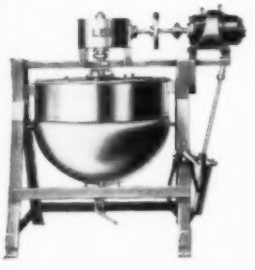
MIXING AND BLENDING UNITS

CW3T
Center-line Scraper Agitator Kettle
80 to 300 gal.



Vacuum Pan
50 to 500 gal.

D3T
Center-line Scraper Agitator Kettle
25 to 300 gal.



Quick Cooling Pan
50 to 200 gal.

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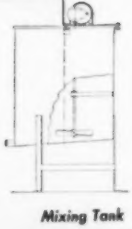
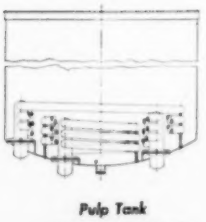
MIXING, COOKING & STORAGE TANKS



Mixing Tank
25 to 500 gal.



Pulp Tank
500 to 2,000 gal.

Storage Tank
100 to 5,000 gal.

LEE METAL PRODUCTS CO., INC.
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such as they have in large machine shops. On the boom or I beam of the crane there would be an electric trolley, designed to move back and forth on the boom under the control of the operator. At either end or both of the 100 foot bays there would be a 20 foot aisle for the operation of fork lift trucks.

Operating procedure would be as follows: Incoming material would be stacked on a sling laid flat on the floor in a manner similar to loading a pallet. When loaded to standard height the sling would be folded over the top of the load and pulled tight by some suitable device and clamped shut. On the assumption that a way can be found to pull the slings tight enough, the ends of the load would not be covered by the sling.

Conventional fork lift trucks fitted with a clam shell grab would pick the loaded slings up from the top and convey them to one of the bays, where the overhead traveling crane could get hold of them in the same manner. Tarpaulins could be used with loops for the grabs to catch. Incidentally the same idea could be employed in conventional warehousing.

Having grabbed a load the overhead crane would convey it to the appointed stack in the bay and would lower it into position. The assumption is that all stacks would be twenty feet high with space above that for the operation of the trolley and the crane. When a load was needed the overhead crane would grab it from above and convey it to the trucking aisles. If the load was at the bottom of a particular stack the crane would fish off the upper loads and set them aside until the desired one was reached.

The same idea could be applied to a basement in which cases runways made of channel iron supported from below would enable suitably designed fork trucks themselves to run over the stacks below and deposit the loads in the appointed places. In this case, assuming the application was made to a new building the headroom above the warehouse pit or basement could be kept very low.

In either case the amount of space lost would only be somewhere between ten and fifteen per cent as against 45 to 60 per cent in the conventional warehouse, which is lost in aisles, columns etc. Actually the space loss is much greater than that if you take into account the six or eight inches necessarily lost between pallet stacks. Considered from a cubic space viewpoint the loss of holding capacity is enormous when you take into account the space lost above partially filled pallet stacks.

I have to date only roughed out this idea. But I am going to design it in detail to see what relative costs are as compared with conventional construction, and then, with due allowances, I am going to calculate the holding capacity of a given cubic content of building compared with conventional construction.

In the meantime the idea of netting or bundling stacks and handling them from the top might be worth playing with with your present equipment. To prevent excessive bottom sag you might have to use slabs of some sort of rigid material. The amount of sag you would get would depend on how the sling was designed and the manner of its reinforcing.

If this notion even if impractical serves no useful purpose other than to stimulate thinking it will have been worth while. We have to reduce the amount of space devoted to storing materials and likewise we must improve and speed up material handling methods.

Lots of good ideas go kiting because of the stumbling blocks of cost or maintenance. A dozen years ago I I thought I had the solution when I conceived the idea of a warehouse a couple of hundred feet wide having only two aisles: an intake aisle and a discharge aisle. Between the aisles were pallet conveyors stacked four high and slightly inclined toward the discharge end. (This particular manufacturer had quite a few items but all were big run items as we know them.) The idea was that, using an indexing system similar to that described above, loaded pallets were to be pushed into the stacks from the intake end and removed from the opposite end. Using the cheapest and most widely spaced rollers that could be obtained, the cost of the set up with the necessary supporting structure, blew the idea sky high even before we put a line on paper.

Big Thoughts Make Big Men

Over the quarter century of my consulting practice I have made a hobby of studying the mental attitudes of men in various executive positions. For the purpose of this discussion they may be divided into two major categories: those whose mental horizons are fixed and can be expanded with difficulty, if at all, and those whose horizons are unlimited and expand with the expansion of their problems, projects and prospects.

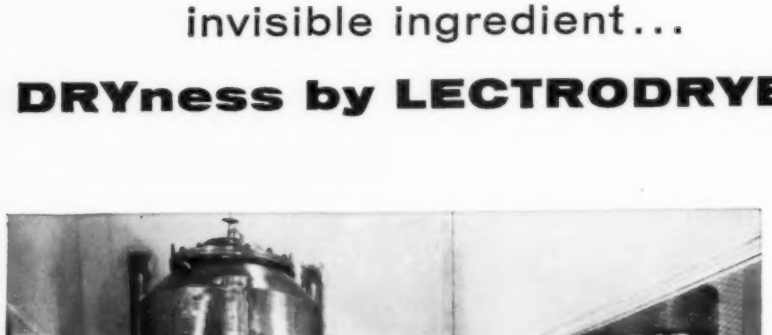
Many production executives for instance do an excellent job of managing fifty people and a mechanical output speed of fifty units per minute. But when they are confronted with the necessity of handling several hundred people and a multiplied mechanical output, they become bewildered. Because their mental horizons are limited, they find it congenitally impossible to think in big terms. So they fail when ultimately they get their big chance.

A good example of what I mean by "expanding horizons" occurred during the war years at the Chattanooga Medicine Company. Before the war it was an easy going outfit. Factory personnel never exceeded one hundred and fifty people. Procedures were manual or semi-automatic. Materials were received and shipped by truck, the plant being located off the railroad tracks, and only a few carloads of materials were dealt with during any one year. Then came the war and big government contracts for medicines, many of which the company had never made before. Then came K Ration assembly. Semi-automatic handling gave way to automatic produc-

Pfizer adds this
invisible ingredient...

DRYness by LECTRODRYER*

Air-conditioning type Lectrodryer



Sterile rooms at various plants of Chas. Pfizer & Co., Inc. are maintained at a constant low humidity by Lectrodryers.

• Formulation, processing and packaging of many Pfizer pharmaceutical products are carried on in DRY atmospheres. 10% relative humidity is quite common in their operations. Thus they safeguard moisture-sensitive materials and methods by eliminating this variable and holding moisture at a constant, low figure.

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The booklet, *Because Moisture Isn't Pink,* describes Lectrodryer installations in many industries. For a copy, write Pittsburgh Lectrodryer Company, 309 32nd Street, Pittsburgh 30, Pennsylvania (a McGraw Electric Company Division).

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LECTRODRYERS DRY
WITH ACTIVATED ALUMINAS

LECTRODRYER

* REGISTERED TRADEMARK U. S. PAT. OFF

tion. Personnel skyrocketed to hundreds of people working on three shifts. Materials came to the plant by dozens of truck and car loads daily—at one time thirteen carloads were handled in a single day.

Up to the war Sam Noble, plant manager of Chattanooga had had a relatively easy time as did his assistants, Jim Grainger, Bob Klein and Enoch Jennings. I wondered if Sam and his boys would stand or fall under the multiple load so suddenly thrust upon them. They didn't fall. They took the job in their stride.

Sam Noble not only grew with the job; he grew faster. Not only did he handle revamping the plant; he obtained the initial K-Ration contracts and thereafter was the army contact man and master of production as well. Sam handled a thousand people as easily as he had handled a hundred and I became convinced he could have handled ten thousand without worrying about the size of his job or the weight of his responsibilities—provided of course the responsibilities didn't interfere too much with his fishing.

A similar experience occurred twenty years ago at Norwich when Howard Sumner ruled the production roost. Originally I was retained to redesign their drug extraction set up but I convinced Sumner the entire plant should be modernized. Up to that time he and his assistants thought their plant was away ahead of any in the trade. (At least two of his associates were still skeptical about the outcome a year after the job had been in progress.) But Sumner's vision took in the distant horizon. As a result of the modernization plan, which was the most extensive ever undertaken in the trade up to that time since it involved not only the entire plant but the administrative offices and laboratories as well, the capacity of the plant as I had predicted, was trebled before it became necessary to build an extension to the existing works.

That program made possible Norwich's enormous war production. It provided research facilities that led eventually to the establishment of the very profitable, ethical subsidiary, Eaton Laboratories.

Consider this one item: before the war the tablet, pill making and coating departments occupied two complete floors in adjacent buildings—a total of 29,000 square feet of space. Annual production had never exceeded 500 million coated and uncoated tablets, pills, capsules and triturates. We boiled the department down to 14,000 square feet of space—less than half the space occupied before (poor old Ed Kelly, tablet superintendent, damned nearly had convulsions and accused us of setting up a "lunch wagon" for him to make tablets in). But we did it in spite of Ed. Tablet production sky-rocketed during the war. During one of the war years Norwich produced two and a quarter *billion* tablets—*five times pre-war maximum!* And that, in less than half pre-war space.

The department now (1956) is not any bigger spacewise than it was in 1936. The old machines have been replaced with bigger and faster equipment of course and, since Norwich has become a primary producer of aspirin tablets, the wartime production figure cited above is now only a drop in the bucket. Undoubtedly the tablet department alone has, in the intervening years, repaid the cost of modernizing the entire plant.

Sumner could see in spite of the skepticism of some of his associates that the cost of the job was justified economically by the size of the business the company was then doing and his broad vision enabled him to see that at the same time the modernization job would establish a foundation which would enable the company to capitalize future opportunities whatever they might be.

But in addition to seeing the distant horizon and hearing the distant drum one must be able to translate the vision to the directors who control the purse strings. And that's what Sumner did.

Committees

I have long been an opponent of a plethora of committees. To show what happens when unguided committees get out of hand, I append the following comment from the New York Herald Tribune, regarding the uproar in the Pentagon when Gardner got booted out of his job:

"The Pentagon reaction took two forms. First a whole cat's cradle of missile committees was formed. There is a "top level coordinating committee" headed by Under Secretary of Defense Reuben Robertson, another committee under Secretary of the Air Force Donald Quarles, an Army-Navy co-ordinating committee, and so on.

Having run his own show, Gardner now had to report to this array of committees, as did others working in the long-range missile field.

The result was the maximum of organizational confusion."

Conformity

For the first time I, as a professional engineer, am required by law to take out a social security number and pay the social security tax. I don't need an annuity from the government at any time. I don't want it. To hell with Uncle Sam! I'll provide my own security. But my tax man was adamant. If I didn't pay I'd be subject to penalties, fines, and the end, the clink. My lawyer upheld the tax man. He said, "Ours is a government of law. This is a specific law and you must abide by it. If you don't like it; if you think it infringes your rights under the Constitution, it is your privilege to try to have the law changed. But in the meantime you have no alternative but to obey the law unless you want to suffer the consequences." Thus do our personal liberties disappear, slowly and insidiously, one by one. I notice, however, that the damn lawyers got themselves off the hook. They wrote the bill.

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For users of your products, G-11 means fresher, cleaner skin, better protection against skin blemishes, and effective deodorizing action. May we tell you more about the sales- and profit-making benefits of G-11?

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Compounder's Corner

New Zinc Oxide

Zinc oxide is perhaps the most frequently and most voluminously used agent in topical dermatotherapy. Because of an almost total absence of pharmacological discussion in the formal texts on dermatology, its use by the dermatologist is developed in a nebulous, almost subconsciously instinctive manner. The usual concept of its action is probably that of an inert blanket. B. Appel, L. M. Ohmart, R. F. Sterner (*A.M.A. Arch. Dermatol.* 73:318, 1956) could not demonstrate any value as a bacteriostat against several common bacteria.

Calamine, used in external preparations for well over 300 years, is a zinc ore found naturally in Europe, England, and America. Exactly how it was introduced into dermatotherapy is not clear, but the fact that some calamines possess reddish or brownish-red colors, approximating skin color, probably was the most important factor in the spread of its use. Because of its wide variation in composition, as well as its inconstancy of color, it was replaced by a synthetic called prepared calamine, made by adding about 0.5 per cent red ferric oxide to white zinc oxide. This is pale pink.

Neocalamine, a much more cosmetically acceptable skin cover, made by adding three per cent red ferric oxide and four per cent yellow ferric oxide to white zinc oxide, enjoyed only a few years of popularity. Principally because of its staining property, it has been deleted from the 10th revision of the National Formulary.

Neo-Zinc Oxide Hyperfine is a new form of chemically pure zinc oxide. By the special technique of its manufacture, its molecular structure has a distortion in its crystal lattice which reflects light so that its color is moderate orange-pink ("flesh," "red," "brick red," "buff red," etc.). The particulate size is extraordinarily small, about 200 A. Aggregates of the particulates can be milled or micronized down to as small as 1 μ. The prepared powder has a characteristic mobility, is easily dispersed when rubbed on the skin, to which it adheres with a dry, palpable tenacity.

It combines pharmaceutically as easily in all formulations as does white zinc oxide but is cosmetically as effective a skin cover as the usual cosmetic preparations.

Lauryl Ether Sulfate Shampoos

Sipon ES is a new sodium ethoxylated lauryl alcohol sulfate being offered by American Alcolac Corporation, which shows certain useful properties applicable to shampoo formulation. At a price very close to that of sodium lauryl sulfate (and lower than that of the corresponding triethanolamine salt) Sipon ES forms solutions that remain clear at below-freezing temperatures and form as high a foam level in the presence as in the absence of hard water.

The 30 per cent solution is pale yellow, clear and viscous. Its odor is mild, its cloud point is -4 to $-6°$ C. and the pH of a 10 per cent solution is 7.5 to 8. The small amount of free fatty alcohol (below two per cent) contributes to foam stability. A wide range of viscosities can be obtained by additions of small amounts of sodium or ammonium chloride, lauryl alcohol, lauryl ethoxy ether and certain fatty amides. Sipon ES gives sparkling clear solutions with water of any degree of hardness, is stable to pH values above three and has less tendency to hydrolyze than lauryl sulfates. The new sulfate is an anionic active compound and is therefore compatible with other anionics and with nonionics, but is incompatible with true cationics.

Sipon ES, in comparison with sodium lauryl sulfate, is a better wetting agent, and is even more effective in hard water than in distilled water. Again, foaming power is outstanding and is not affected by hard water. Since the product is compatible with soap, a product with good foam in the presence of soap can be readily formulated. The combination of properties suggest outstanding application in bubble baths and shampoo formulations, especially where clarity at low temperatures is desirable.

Aerosols

During the past ten years, the chemical industry has capitalized upon the many advantages offered by aerosols produced from pressurized containers. Production has increased at a rapid rate from 5½ million containers in 1947, to an estimated 250 million in 1955. Based upon an average retail value of one dollar per unit, this is a quarter billion-dollar per year industry.

The phenomenal growth of the aerosol industry is based solidly upon consumer acceptance of aerosol products as handy tools with which to do many chores faster, easier, and more conveniently than before. Push-button response and the elimination of the fuss and bother of hand sprayers and paint brushes appeal to the American public.

Nearly 100 different types of products are now available in aerosol cans including such well-known items as insecticides, room deodorants, mothproofers, Christmas tree snow, plastic sprays, paints and lacquers, fire extinguishers, hair lacquers, suntan sprays and colognes. Many cosmetic experts consider the aerosol package to be the most important cologne advance in the last century. Besides being the best way to apply perfumes and colognes, the fragrance is protected by the exclusion of air and by the elimination of evaporation and oxidation each time an ordinary bottle is opened.

Corrosion of containers is of great concern to packagers of products like shampoos (which contain synthetic detergents), perfumes and colognes (which contain alcohol), and personal deodorants (which contain highly corrosive aluminum salts).

Safety is becoming an increasingly

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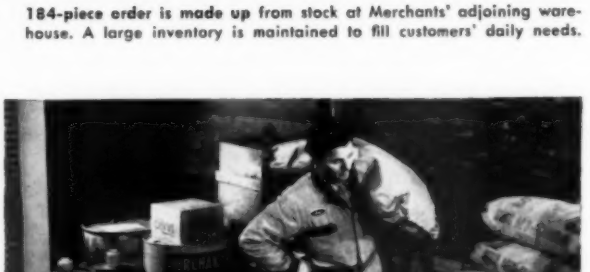
184-piece order is made up from stock at Merchants' adjoining warehouse. A large inventory is maintained to fill customers' daily needs.

rush order:

TEN TONS OF ASSORTED CHEMICALS



Delivery is made an hour and 30 minutes from the time order was placed. Ten tons, 184 pieces — delivered immediately from a *single source!*

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Each Merchants' office is a single, reliable source for a wide assortment of chemicals. Because stocks at Merchants' warehouses are maintained with one consideration in mind — customer service — orders for assorted chemicals are filled rapidly and completely. For 35 years Merchants Chemical has given industrial chemical users this type of specialized service. Products include acids, alkalis, fungicides, surfactants, chlorinated solvents, emulsifiers, laundry compounds, soaps, dry ice and chemical specialties.

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important problem because of the potential hazards involved with the recent introduction of pressurized glass containers that might break and shatter when accidentally dropped. Plastic containers, especially for the small two- to six-ounce packages, are an even newer development that will require testing on the consumer market.

Valves are another part of the aerosol problem that will require more investigation. Further knowledge is desired concerning the effects of nozzle design and container pressure upon spray pattern and particle size.

If the past ten years is any indication of what can be expected to take place in the years ahead, the aerosol industry will continue to make rapid strides both in expanding its markets and in improving the technical quality of its products through research. — J. M. Pilcher, *Battelle Tech. Rev.* 5:No. 4, p. 3, 1956.

Hydrocortisone Ointments

A set of evaluations was carried out by F. Kalz and A. Scott (*A.M.A. Arch. Dermatol.* 73:355, 1956) using 11 vehicles, all of which contained hydrocortisone one per cent. Five vehicles proved to be the most generally useful; these were characterized by not exerting too drying an effect, and yet not being too greasy. This selection included (*a*) an oily absorption base (3); (*b*) two water-in-oil emulsions (4 and 6); (*c*) two oil-in-water emulsions (5 and 7). On the other hand the "too dry" and the "too greasy" bases fared poorly. When the bases were applied for short periods only (three days), the differences were not as obvious as when longer intervals were studied.

As a general rule, the thinner the skin the more suitable are the greasy bases; 6 and 7 were almost uniformly successful in all areas, while 9 was uniformly irritating. Areas such as groin, axillae, and antecubital fossae, where there is increased perspiration, did best with the drier bases.

In addition to the importance of the localization of the dermatitis in determining the type of base, the influence of the diagnosis is important, for the atopic patient proved the most difficult to satisfy, while the patient with contact dermatitis accepted almost all bases without trouble.

With regard to the complaints listed for each base, the patients' estimation of the degree of dryness of a base corresponded closely with the known water content and properties. Those five bases which objectively gave the best therapeutic results were among those which received the least number of complaints.

The differences in therapeutic actions of hydrocortisone in different vehicles is not determined primarily by any specific influence of the bases on the penetration of the hormone. Rather, the variations depend on the compatibility of the base with the skin disease and its different locations.

No all-purpose "best" base can, therefore, be devised, and, although four vehicles gave satisfactory results under most conditions, it appears that individual choice of the base, taking into account type and localization of the skin disorder, is prerequisite for optimal therapeutic results.

Base 3

Cetyl-stearyl alcohol	27.0
Sodium lauryl sulfate	3.0
Petrolatum	70.0

Base 4

Isopropyl myristate	4.5
Methyl stearate	4.5
Diglycol stearate	18.1
Mineral oil	45.3
Ceresin	9.1
Yellow wax	4.5
Cetyl alcohol	4.5
Lecithin	8.1
Water	0.5

Base 5

Glycerin	24.8
Cetyl alcohol	14.9
Sesame oil	20.0
Myrj 52	5.0
Glyceryl monostearate	5.0
Water	30.3

Base 6

Cetyl-stearyl alcohol	21.6
Sodium lauryl sulfate	2.4
Petrolatum	56.0
Water	20.0

Base 7

Cetyl alcohol	11.7
Waxes	5.2
Propane diol	7.8
Sodium lauryl sulfate	1.6
Mineral oil	14.1
Water	59.6

Thickening Agents

Chemists of the French firm of Monsavon L'Oreal have discovered that the salts made by combining anionic and cationic materials are useful for thickening hair dye solutions, permanent waving lotions and other cosmetic products. Details concerning the preparation of the salts are given in French patent 1,068,586. The anion-active compounds used in the reaction are in the form of the free acids rather than their soluble salts. The anionic acid may be a fatty acid, an acid sulfate of a fatty alcohol or an alkylaryl sulfonic acid. Similarly the cation-active compounds employed in the reaction are in the form of the free amines rather than their quaternary ammonium salts.

As one example, oleic acid is reacted with one of the Sapamine cationic compounds in the form of the free base. The latter is the oleylamide of diethyl ethylenediamine. The two components are used in equimolar proportions and the product is a liquid.

The reaction products, heated with water at concentrations of 0.5 per cent to five per cent, give stable gels which have a smooth and creamy consistency. The gels are partially opaque and are transparent in thin layers. They are not affected by the addition of substances such as hair dyes, ammonia and thioglycolate which are destructive to emulsions. For this reason the cationic-anionic salts are valuable for the preparation of hair dye creams and permanent waving creams. The thickening agents should be beneficial to the hair in view of their relationship to the cationic hair conditioners. Their use as thickeners for detergent shampoos is suggested in the patent specification.

Thickening agents are convenient to use the form of 10 per cent to 20 per cent solutions in ethyl alcohol or isopropyl alcohol. The addition of two per cent to 10 per cent by volume of one of the alcoholic solutions is sufficient to thicken aqueous lotions. The liquid product, in the form of a 60 per cent solution in isopropyl alcohol, may be used to thicken commercial hair dye solutions containing soaps. In another variation, the thickener is added to a dye solution using enough isopropyl alcohol to prevent the formation of a gel. The dye solution is converted to a cream on addition of the aqueous solution of hydrogen peroxide just before it is applied to the hair.

Aside from their value as thickeners, the salts formed by the combination of cationic and anionic compounds are useful as emulsifying agents. The development of this new class of surface-active materials opens up a wide field of experimentation and may lead to improvements in numerous types of cosmetic preparations.—*Schimmel Briefs.*

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Advancing Therapy

New Tranquilizers

Extensive tests and comparisons over a period of more than two years of tranquilizing drugs in the treatment of Canadian veterans with mental disease were reported to the meeting of the American Psychiatric Association.

Conducted by Dr. H. Angus Bowes, the paper included the first clinical report in the Western Hemisphere on **Pacatal,** newest of the tranquilizing agents.

In comparing the action of the tranquilizing drugs, the report termed Pacatal, which is chemically related to chlorpromazine, "the treatment of choice in manic excitement and schizoaffective psychoses." And, "in the more chronic patients Pacatal was most effective in the symptomatic treatment of aggression, destruction, restlessness and insomnia."

Less toxic than chlorpromazine, Pacatal produced in 250 patients "no evidence of liver or kidney damage," Dr. Bowes reported. He added: "Pulse rate, blood pressure and temperature remain constant on normal dosage."

Pacatal was found to be almost twice as strong a tranquilizer, but less hypnotic than chlorpromazine. Chlorpromazine produced a faster response in asthenic (lean) types, Pacatal acted more quickly in patients of pyknic (muscular) build.

As a result of the extended study, Dr. Bowes reported that the hospital is now treating patients with both Pacatal and chlorpromazine. "Not only do the two drugs appear to act synergistically but they appear to be mutually antagonistic to each other's complications." This circumstance makes possible the use of reduced doses and the elimination of undesirable side effects, the physician states.

Dr. Bowes' study concludes with the observation that the factors prevalent in modern life are likely to cause us to become increasingly dependent on ataractic drugs, that they are likely to become as much a part of our life as the antacid, or sedative.

Pacatal was discovered in Germany in 1954, and was thoroughly tested in Europe before being introduced to the Western Hemisphere for clinical evaluation by Warner-Chilcott Laboratories, the ethical drug division of Warner-Lambert Pharmaceutical Company.

A spokesman for the company said that the drug has been made available to the Canadian medical profession by Warner - Chilcott Laboratories of Toronto. It will be released to the medical profession in the United States only when extensive clinical trials, now under way in a number of American hospitals, have been satisfactorily completed. This is not expected to occur for several months at the earliest.

In a paper following that of Dr. Bowes, three Illinois researchers, Drs. L. H. Rudy, H. E. Himwich, and D. C. Tasker, reported on a short-term test of patients to whom both Pacatal and promazine were administered for four weeks each. Of fifteen acutely ill schizophrenics, five recovered after promazine therapy, five showed great improvement, four were improved and only one was unchanged. The ten patients who did not recover on promazine, after a two-week period, were given Pacatal (under the name, **Mepazine**). Two of them recovered on Pacatal, three showed great improvement, one was improved, two showed no change, and the drug was discontinued in one case because of dizziness.

Benactyzine hydrochloride (**"suavitil"**) is the hydrochloride of the diethylaminoethyl ester of benzilic acid. It was first described in Switzerland in 1936, and has more recently been studied by Jacobsen and various workers in Scandinavia. Details of the chemistry and general pharmacology, as well as information about the toxicity of benactyzine, may be found in Jacobsen's paper (1955).

It is claimed that the drug relieves anxiety, particularly in psychoneurotic patients, and that no toxic effects are observed in therapeutic doses (1-5 mg. up to four times a day in Scandinavia). Its low toxicity is stressed by Jacobsen (1955).

Of the 110 patients treated by E. B. Davies (*Brit. Med. J.* 1956, p. 480) with this drug, 25 were psychotics and 85 neurotics. The cases are described and the results assessed; 67 patients derived benefit; there were no toxic effects.

Benactyzine appears to be an important addition to the therapy of psychological disorders. It is easy to give by mouth, is quickly eliminated, and there is no evidence that it is cumulative. In usual therapeutic doses (1-4 mg. thrice daily) there have been no toxic results from its use, though there are certain immediately unfavorable results in patients who do not tolerate it. It is suitable for use with other sedatives, particularly phenobarbitol, and there may be value in using it in combination with such other drugs. It is advisable that the drug should be used with discrimination, for otherwise good results may not be obtained, and this would prejudice the use of a potentially valuable means of therapy. The findings so far indicate that further trials are advisable.

Atarax

Atarax is a new, completely different ataraxic, not a modified molecule. It is one of a series of p-chlorobenzhydryl piperazine derivatives and is designated chemically as the 1 - (p - chlorobenzhydryl) - 4 - [2 - (2 - hydroxyethoxy ethyl] diethylenediamine.

Clinical tests in Europe, Mexico and in the United States during the past two years have shown Atarax to be effective as a calming agent in the symptomatic treatment of many diseases in which emotional strain is a complicating or even a causative factor.

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in the office of a general practitioner, not the hospitalized, mentally ill patient.

For infants and children, Atarax is indicated for restlessness, nervous tics, hyperactivity, nightmares and anxiety or homesickness caused by a temporary separation from the parents.

For adults, Atarax is indicated for apprehension and anxiety associated with pregnancy, parenthood, financial worries, premenstrual tension and dysmenorrhea, insomnia, senile excitation, premedical, predental or preoperative apprehension and tension, fatigue, climacteric, and occupation stress.

Assimilation of the Atarax tablet is rapid, and calming effect is said to begin within 15 minutes. Therapeutic effect is generally at its maximum within two hours. It then abates and generally disappears after six to 20 hours.

Laboratory studies have shown Atarax to be nontoxic and free of major side effects. No instances of liver, blood, or kidney damage or parkinsonian effects have been reported. Dosage is tailored by the physician to meet the needs of the individual patient, and may range from one or two 10 mg. tablets to four 25 mg. tablets daily.

The Common Cold

The treatment of the common cold according to P. Jaeger (*Amer. Pract. & Dig. Treat.* 7:632, 1956) is of necessity only symptomatic, since the etiology is still unknown and there is no known drug on the market which is effective. Local symptomatic relief depends upon the specific part of the respiratory tract involved and affected by the common cold. Local vasoconstrictor drugs, such as nose drops or sprays in handy plastic spray-bottles containing ¼ up to one per cent ephedrine or ephedrine derivatives in physiologic aromatic saline solution are very helpful. However, they may not be used too often and not for any length of time, generally not longer than for three to four days consecutively. Inhalers may be used also, but not to excess, and they have little effect when nasal passages are completely blocked by local congestion. The excessive and prolonged use of nasal solutions or inhalers will aggravate matters by inflaming the mucous membranes and increasing the congestion. The sore throat and cough which is common during the course of the disease is best treated with throat lozenges with small doses of codeine and warm drinks. Certain selected drugs such as small doses of aspirin, three to five grains, combined with one to two grains of phenacetin will usually ameliorate the generalized aches and pains of the sufferer. A buffered tablet with aluminum hydroxide is preferable because plain aspirin tends to upset the stomach of many patients. The buffered - aspirin - phenacetin tablet should be taken three to four times daily, preferably after meals. Antihistaminic agents are helpful especially in cases which have an allergenic component. Since it is not easy to determine the allergenic factor, it is advisable to add one of these agents to the aspirin-phenacetin tablet.

Antibiotics are undoubtedly useful to combat complications, but have little effect on the course of the uncomplicated common cold.

A new vaccine developed by the U. S. Public Health Service seems to be effective against so-called APC viruses, which we find in the adenoids, pharynx and eyes of human beings, which are probably the cause of grippe and flu epidemics affecting large segments of the population. The vaccine's protection against the harmful viruses might last several years, which certainly would be of great help, since an attack of the common cold produces little or no natural immunity against subsequent attacks.

New Pharmaceuticals

Persistin tablets (Sherman Laboratories) contain 2½ grains (160 mg.) of acetylsalicylic acid and 7½ grains (480 mg) of salicylic acid and are recommended for prolonged analgesia. They are available in bottles containing 90 scored tablets.

Cal-O-Nol (Paul Maney Laboratories) contains precipitated sulfur, resorcinol, calamine, zinc oxide, pyrilamine maleate, bentonite and calcium hydroxide as an emollient lotion for skin irritations, allergic manifestations, insect bites and sunburn. It is available in 4 oz. and one gallon bottles.

Bonadoxin Drops (J. B. Roerig and Company) is a combination of the antihistamine meclizine dihydrochloride and pyridoxine hydrochloride in a pleasant tasting, lime-flavored suspension for the treatment of infant colic, paroxysmal fussings and irritable crying in the hard-to-manage infant. The product is packaged in a 30 cc. plastic dropper bottle, each cc. containing 8.33 mg. meclizine and 16.67 mg. pyridoxine.

Pediatric Piptal (Lakeside Laboratories, Inc.) contains 4 mg. of N-ethyl-3-pyperidyl-benzilate methobromide and 6 mg. of phenobarbital in one cc. It is recommended for the treatment of colic in infants and is available in 30 cc. dropper bottles.

Mepherin (G. F. Harvey Co.) contains, per tablet, 300 mg. mephenesin, 60 mg. betaine hydrochloride and 6 mg. ethaverine hydrochloride for relief from skeletal muscle and smooth muscle spasm. It is available in bottles of 100 and 1,000.

Polycycline-Sulfa (Bristol) is available in a two-ounce bottle containing 60 cc. of cherry-flavored suspension. Each 5 cc. teaspoonful contains calcium tetracycline equivalent to 125 mg. of tetracycline hydrochloride plus 167 mg. each of sulfadiazine, sulfmerazine and sulfamethazine.

Biocol Cold Capsules (Bryant Pharmaceutical Corp.) is a citrus bioflavanoid formula for aborting and relieving the symptoms of the common cold. Each capsule contains salicylamide 3.5 grains, phenacetin 2.5 grains, caffeine 0.5 grain, ascorbic acid 50 mg., pyrilamine maleate 25 mg. and citrus vioflavonoid (hesperidin) 25 mg. It is sold in vials of 20.

Metimyd Ophthalmic Suspension (Schering) contains prednisolone acetate 5 mg. per cc. suspended in an isotonic buffered and preserved solution of sulfacetimide sodium, 100 mg. per cc. It is anti-inflammatory, anti-allergic and anti-bacterial and is indicated in inflammatory and allergic diseases of the eye. It is sold in a 5 cc. dropper bottle.

Pomalin (Winthrop) is an antidiarrheal agent in palatable suspension for oral use. It contains four active ingredients: sulfaguanidine, pectin, kaolin and opium and is sold as an exempt narcotic in 16 ounce bottles.

Pentritol Tempules (Eyton Company, Inc. of Chicago) is a controlled disintegration capsule of 30 mg. pentaerythritol tetranitrate which extends coronary vasodilation of a single dose to 12 hours. The capsules are available in bottles of 60, 250 and 500.

Eye-Ear Drops Neo-Delta-Cortef (Upjohn) contains, per cc., 2.5 mg. delta-1-hydrocortisone acetate, 5 mg. neomycin sulfate preserved with 1:5000 myristyl - gamma - picolinium chloride. The preparation is intended for initial treatment in acute ocular inflammations or infections of the external ear, and is available in a 5 cc. dropper bottle.

Serpatilin (Ciba) is a combination of 0.1 mg. of reserpine as a tranquilizer and 10 mg. of Ritalin (methyl-phenidylacetate hydrochloride) as a mild psychomotor stimulant. It is available in bottles of 100.

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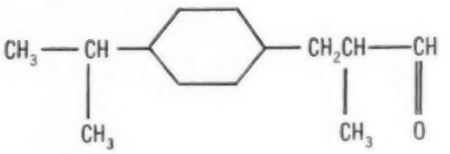

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Skin Research

Skin Pigmentation

The dark pigment melanin, elaborated by the epidermal chromatophores, is an important determinant of skin color. In recent years, extensive clinical and laboratory investigations have greatly advanced our understanding of the biochemistry of melanin formation and have thrown considerable light on the mechanism by which changes in pigmentation may be produced.

Melanin is an insoluble polymer of high molecular weight. The precursor of this pigment in vertebrates is tyrosine. Under the influence of the copper-containing enzyme tyrosinase, tyrosine is oxidized to dihydroxyphenylalanine, which is oxidized to the quinone of dihydroxyphenylalanine, with tyrosinase again serving as the enzyme. Subsequent oxidative steps lead to the formation of melanin. In the normal unpigmented skin, the tyrosine-tyrosinase system exists in an inhibited state. In Negro skin and in malignant melanomas and in certain other physiological and pathological conditions, the inhibitory factor is removed and the reaction proceeds to completion.

Certain of the factors influencing the tyrosine-tyrosinase reaction have been determined, while others are as yet only matters of speculation. Thus, albinism arises from a genetically transmitted lack of tyrosinase, while tyrosine deficiency is thought to cause the light skin and inability to sun-tan seen in individuals with phenylpyruvic oligophrenia, a genetically transmitted metabolic disorder in which the normal transformation of phenylalanine to tyrosine does not occur. Again, since the enzyme tyrosinase requires copper, factors that lead to a binding or deprivation of copper, such as the presence of sulfhydryl groups, may inhibit pigmentation, while conditions that favor the liberation of copper are conducive to increased pigmentation. Radiant energy is thought to lead to pigmentation through a reduction of sulfhydryl groups in the skin, while the heavy metals such as arsenic or bismuth may compete with copper on the sulfhydryl groups, or, if present in excess, may displace copper from the enzyme and thus may either increase or decrease pigmentation.

It has long been felt that certain endocrines play an important role in regulating skin color, as evidenced, for example, by the deep pigmentation seen in adrenal cortical hypofunction (Addison's disease) and the increased pigmentation that occurs during pregnancy. Furthermore, pigmentation may follow the administration of estrogens or of corticotropin but not of cortisone, while the pigmentation of adrenal cortical hypofunction frequently decreases appreciably with cortisone administration.

The role of the pituitary in pigmentary changes in certain fish, amphibians, and reptiles is well established. In such animals, removal of the pituitary leads to a permanent lightening, while injection of minute amounts of pituitary extract causes a rapid, transient darkening of the animal. The increased pigmentation is due to dispersion of the melanin within the melanophore under the influence of intermedin, a hormone elaborated in the intermediate lobe of most animals. It is also possible that intermedin accelerates the synthesis of melanin, or, alternately, that the dispersion of pigment induced by the hormone in some way facilitates the oxidation of melanin precursors.

An immediate response to intermedin comparable to that observed in lower vertebrates has never been demonstrated in higher vertebrates, including man. Nevertheless the feeling has persisted that this hormone plays a role in human pigmentation. It must be borne in mind that other pigments; namely, carotene, oxyhemoglobin, reduced hemoglobin, and melanoid, a melanin-like pigment, also contribute to skin coloration. Changes in cutaneous blood flow may play an important role in pigmentary changes associated with hormonal deficiencies or administration of certain endocrine preparations. Thus, while a role by the melanophore hormone in human pigment is an intriguing possibility, it canot be considered as established at this time—*J.A.M.A* 161: 154, 1956.

Percutaneous Vitamin A

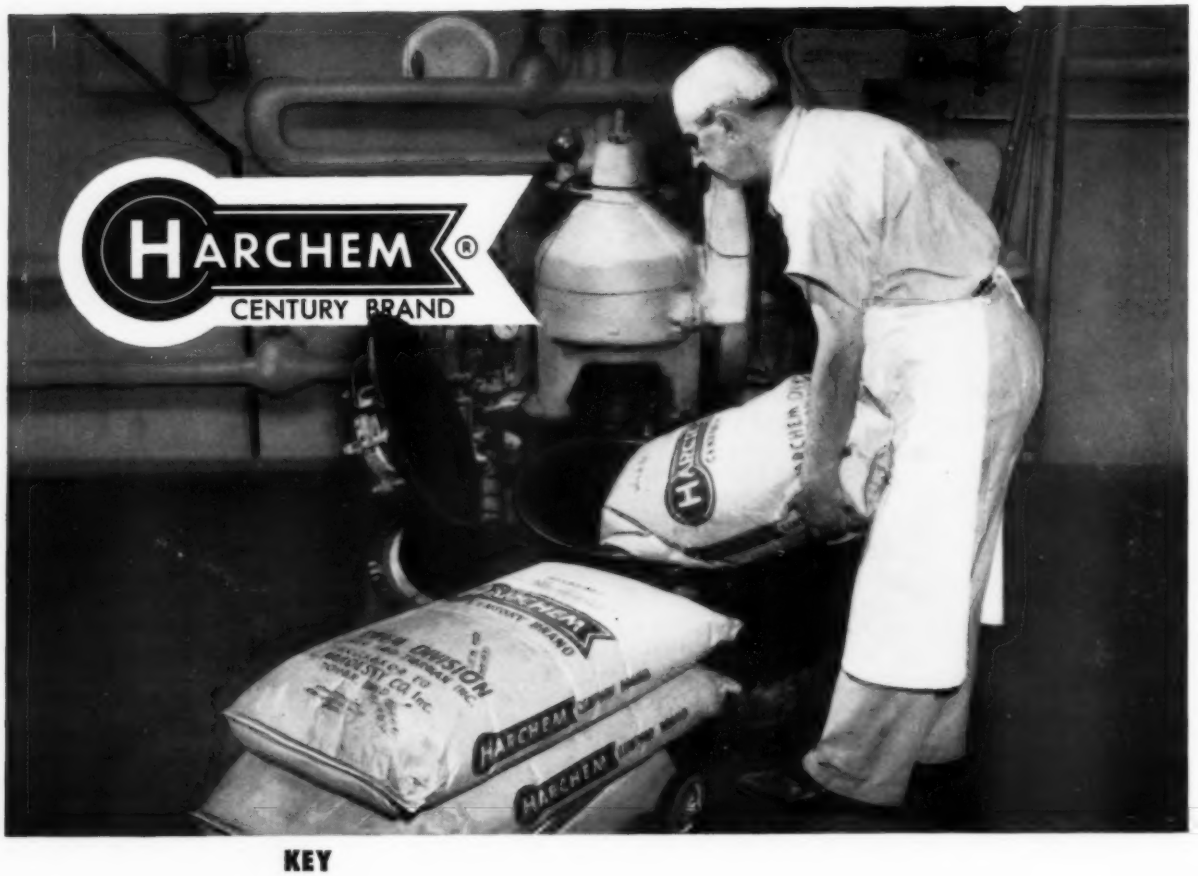
According to an exhibit presented by A. E. Sobel and reproduced in *A.M.A. Arch. of Dermatol.* 1956, p. 388, vitamin A absorption through the skin was investigated to provide an alternate method that avoids the dangers of vitaman A poisoning in the management of those dermatological disorders where massive oral doses of vitamin A are recommended.

"A"-deficiency of the skin may be due to faulty transportation rather than generalized "A"-deficiency. High doses of vitamin A, particularly in aqueous dispersions, produce higher blood levels which provide better transportation to tissues, as shown in milk studies. Note that transfer to milk follows blood levels rather than the dosage.

Diseases of the skin characterized by an increase in keratinization, a symptom of "A"-deficiency, where massive doses of vitamin A were employed, include acne vulgaris, follicular hyperkeratosis, senile keratosis, pityriasis rubra pilaris, Darier's disease, ichthyosis, nummular eczema, seborrheic keratosis, keratosis blenorrhagica, xeroderma pigmentosum, hyperkeratotic lichen simplex chronicus, and dermatitis papillaris capillitii.

An alternate method of management may be topically applied vitamin A in an appropriate medium to avoid the dangers of "A" poisoning.

Studies on "A"-deficient and normal rats show that the percutaneous absorption of vitamin A is about 1/5 to 1/10 as efficient as oral absorption. The normal skin is more efficient in the per-



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cutaneous absorption of vitamin A than the "A"-deficient skin.

Histological studies show restoration of skin structure at the site of application and not at untreated sites. There is a time lag between the development of "A"-deficiency, a shown by severe xerophthalmia and body weight loss, and skin deficiency.

The hypothesis is advanced that the restoration of the skin is induced by vitamin A as shown by tissue culture experiments. When the basal cell has no vitamin A, the rest of the derived cells are "A"-deficient. When the basal cell is exposed to vitamin A the derived cells produce normal skin.

The nature of the medium affects the transfer of vitamin A across the skin. Transfer produced by aqueous dispersions and commercial preparations containing lard gave pathological skin changes, although there was good percutaneous absorption with aqueous dispersions.

Vitamin E, in combination with vitamin A, produces increased storage of vitamin A, when both are topically applied. The difference between corn oil and cottonseed oil as a transportation medium for "A" may be due to vitamin E in the corn oil.

Histologically, the most benign medium for the percutaneous absorption of vitamin A among those tested was the wool fat petrolatum based, cod liver oil preparation (Desitin ointment).

Skin Penetration of Hydrocortisone Ointments

C^{14}-tagged hydrocortisone has been used by A. Scott and F. Kalz (*J. Invest. Dermatol.* 26:149, 1956) as a tracer incorporated into an ointment base containing one per cent stable hydrocortisone, applied to the normal skin of human volunteers, following which biopsies were performed at varying time intervals. After one hour, radioactive material was visualized in the epidermis, by two hours the tracer material had concentrated in the basal layer. After six hours the C^{14} was identified in the cutis about blood vessels, while it had disappeared entirely from the skin after sixteen hours.

Experiments done to compare the penetration of the C^{14}-hydrocortisone through normal skin with that through hyperkeratotic, lichenified areas showed that the material failed to enter the epidermis of the latter by two hours, but had done so after six hours. Its penetration appeared therefore, to be much retarded by this alteration. Application of the tagged hormones to irradiated skin resulted in more rapid penetration before and during the early erythema, but no difference from normal during the late erythema was noted.

Comparison of the rate of penetration of the radioactive material if applied in four different vehicles failed to reveal any major difference dependent on the base used.

Despite the relatively small numbers of biopsies taken it is believed that two features have been definitely demonstrated—first, the epidermal penetration of hydrocortisone has been illustrated, and secondly, its temporary concentration in the basal layer of the epidermis has been shown. The assumption of a preferential penetration of topically applied hydrocortisone through follicular structures is not substantiated by these experiments.

Selium Sulfide Hair Loss

The repeated use of a shampoo containing selenium sulfide for the treatment of seborrheic dermatitis was followed in six cases by loss of hair in varying degrees according to R. W. Grover (*J.A.M.A.* 160:1397, 1956). In all cases the shedding of hair stopped when use of the shampoo was discontinued, and in one of the cases the phenomenon was repeated several times.

Hair Graying

The coloration of hair is due to the enzymatic oxidation of tyrosine in the melanocytes, which are situated between the germinative cells of the hair and which contain the specific enzyme tyrosinase. If this enzymatic function is lost the hair turns gray. Occasionally graying of the hair is caused by vitamin deficiencies or by toxic agents; however, in most cases early or late graying of hair in animals and men is genetically induced. It seems to be correct that in a single hair all melanocytes lose their pigment-producing capacity at once, and, therefore, no transitions exist between the original hair color and the color of gray hair. Studies of Billingham and Medawar (*Heredity* 2:29, 1948) show that tyrosinase activity may spread into neighboring cells as if it were an "infection." Under different conditions, the loss of enzymatic activity also may spread from one cell to the other. Possibly this is the mechanism in the spread of vitiliginous spots. The "infective" mutation of cells cannot spread from one hair to the next because anatomically there is no contact between hairs. Graying in each hair originates in the hair. The best example for genetically induced graying in specific regions without influence on the rest of the scalp hair is the rather frequent inherited gray tuft sagittally across the middle of the scalp, called poliosis circumscribed.—*J.A.M.A.* 161: 299, 1956.

Modified Liquid Petrolatum

This report by M. B. Sulzberger and J. Obadia (*A.M.A. Arch. Dermatol.* 73: 373, 1956) summarizes the results of the use of a mixture of liquid petrolatum, sodium chloride, and less than one per cent of phenol ("P & S Liquid") in the treatment of several common scalp disorders, but in particular of psoriasis of the scalp.

The results in 56 patients confirm those of Vickers. They indicate that P & S Liquid is a valuable addition in the management of psoriasis of the scalp, having as its outstanding feature a relatively high capacity to keep the lesions under control without the disagreeable greasiness, odor, and properties of staining, irritating, or sensitizing so common to antipsoriatic measures.

The results in a smaller series suggest that the preparation may prove of some value also in cases of seborrheic dermatitis of the scalp.

In contrast, P & S Liquid proved relatively ineffective in psoriatic lesions of the glabrous skin.

Whether the beneficial effects are in greatest measure due to the particular combination of the three components or whether any one or two of them would prove equally effective is a question which was not investigated in the present series but which still requires elucidation.

Permeability of Thin Films

G. Weitzel, A. M. Fretzdorff and S. Heller (*Zeits. physiol. Chem.* 301:26, 1955) have developed precise methods of measuring the water vapor permeability of films of fat or fatty acid. The authors were able to demonstrate that vaseline and eucerine, as well as straight-chain fatty acids with at least 16 C. atoms, their ethyl esters, and their glycerides, largely inhibited permeation by water vapor. On the other hand fats with branched fatty acids, or fatty acids alone, esters of medium fatty acids with long-chain alcohols, as well as cis-isomer unsaturated fatty acids, hardly inhibited water-vapor permeation despite good covering properties.

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Perfumer's Shelf

Perfumed Aerosols

A perfume in an aerosol must contend with the effects of the active ingredients, propellants and the container according to J. Pickthall (*Soap, Perfumery, Cosmetics* 29:553, 1956). Further, interaction between these three may cause added complications. Metals, activated metal surfaces, traces of mineral acid may all tend to catalyze complex reactions in or between organic chemicals.

These reactions are often amplified in the presence of alcohol and it is found that many perfumery ingredients unstable in an alcohol/propellant mixture are quite stable when the alcohol is replaced by mineral oil; to some extent the presence or absence of water is the deciding factor. Even under the most favorable conditions, e.g., glass container and using tetrafluorodichloroethane as the propellant, lemon oils are degraded at ordinary temperatures in a fairly short period of time.

While careful attention must be given to the possible clogging of the valve, unnecessary attention has been drawn to the use of resinous materials. Often the resoine must be subjected to a special extraction process before it is suitable to use in aerosols. On the whole, the advent of aerosols has meant a new approach to fixation. Many solid products responsible for fixation effects cannot be used in a perfume for a specfic aerosol product. This may be due to their instability or, more often, to the fact that their presence in large amounts leads to problems of insolubility. Further, some normal fixatives tend to give rise to irritation on the skin when sprayed as fine mists. Certain resinous products are unsuitable for use in many aerosol formulas. This has meant that new fixatives, both natural and synthetic, have been developed, and even then the individual product will not have an universal application but must be considered and tested in the specific aerosol under discussion. One of the most surprising effects given in alcoholic solutions of perfumes under pressurized conditions is that some odors appear to be intensified, while others, although suffering no other deterioration, seem to lose "life."

It has also been said that the use of a low-pressure propellant eliminates problems of odor deterioration and often enhances the fragrance. This may well be true of a perfume made specially to withstand aerosol conditions, but it is certainly not so with the majority of perfumes made for a conventional type of packing, i.e., in non-pressurized containers.

The Fatty Aldehydes

The fatty aldehydes have been found widely distributed in nature. They are present in very small amounts, usually less than 0.5 per cent, in a great number of the essential oils. It is not surprising that the perfumer finds these materials indispensable in his efforts to duplicate the best perfumes in nature. Of the fatty aldehydes the straight chain members from C-8 to C-14 are the most important in the preparation of synthetic perfumes.

Although seldom used in greater than trace quantities, the fatty aldehydes play an important role in modern perfumery according to J. L. E. Erickson, T. F. Wood and H. C. Saunders (*The Givaudanian*, March 1956). Their occurrence in natural essential oils does suggest one reason for this importance. Another explanation which is interesting though unusual is suggested by Jellinek in his recently translated book, "The Practice of Modern Perfumery." He points out that the fatty aldehydes have perspiration-type odors which when combined with fecal-type odors such as indole, skatole and para-cresol give a maximum erogenic effect. Thus in a perfume the fecal character of jasmin or ylang complements the sweaty character of fatty aldehydes.

The group of fatty aldehydes that the present-day perfumer works with has been expanded to include some purely synthetic fatty aldehydes which are not known to occur in nature. These aldehydes are undecylaldehyde and its unsaturated analog, undecenylaldehyde, and myristaldehyde.

It is possible now to prepare fatty aldehydes which are completely stable both against polymerization and oxidation. Experiment has proven these to be superior in stability and odor value. When incorporated in perfume formulations in soap they exhibit outstanding color and odor stability. Now that these versatile aromatic compounds can be supplied in completely stable condition, it is to be hoped that they will find even wider application in the field of perfumery.

The following aldehydes are among those most commonly used by perfumers.

n-Octylaldehyde, in concentrated form, has a powerful, pungent odor and when used in low concentrations, it lends a citrus peel odor to a perfume composition. It is widely used in cologne formulations in which it acts as a fortifier for such citrus oils as lemon, orange, bergamot and mandarin. It also has a tendendy to bolster the top note of the cologne compositions without adding a foreign odor which would be obtained if certain esters were used to attain this top note effect. In extreme dilutions, it can be utilized in rose, neroli, jasmin and lilac fragrances in which it helps round out and balance the formulation. Extreme caution must be exercised when using this aldehyde due to its overpowering effect when used in high concentrations. A one per cent to 10 per cent working solution is recommended.

n-Nonylaldehyde has a warm, fatty, rose-type odor and has found wide application in floral compositions due to the first two characteristics. It may be used in cologne-type products for its blending effect on the floral and citrus oils and is extremely interesting for arti-

ficial jasmin and orris type blends. It is used in soap and detergent perfume compositions to which it gives power and top note.

n-Decylaldehyde has a slightly citrus, fatty odor which is suggestive of orange and is used to bolster citrus oils. It can be used more liberally to fortify these oils and give them a residual effect. It has found wide application as a top note in many classical perfumes when used in combination with other aldehydic materials. It is useful in all types of floral blends and is extremely desirable in jasmin, gardenia, mimosa, rose, lilac and other formulations where the residual properties of this aldehyde are necessary.

Undecenylaldehyde has a green, rosy, fatty character and is used in classical type blends as is the n-decylaldehyde. This aldehyde may, however, be used in more liberal concentrations because it is less pungent than the other aldehydes. It is used as the basis for moss-type perfume blends in which it helps bring out the finer notes of the absolutes used in these formulations.

Undecylaldehyde has a fatty, pungent character which is similar to but less fruity and more residual than undecenylaldehyde. It is used in compositions for soap because of its stability in that medium, and for rounding out rose, jasmin, tuberose and gardenia fragrances to which it gives the desired depth without adding the characteristic aldehydic topnote.

Lauraldehyde has a powerful, sweet, fatty-like odor which can be used as a base for violet, jasmin, muguet, lilac and other types of floral fragrances. It is widely used in soap compositions and to prolong the lasting effects in perfume blends. When used together with n-decylaldehyde and undecenylaldehyde it gives one of the most successful combinations found in modern fragrances.

Myristaldehyde has a fatty, orris-type odor and is used mostly in compositions requiring orris and ionone notes such as jasmin, gardenia and, of course, violet fragrances. It is used extensively to extend orris absolute and helps in the blending of perfume compositions without changing the basic orris odor. When used in perfume blends, it extends the lasting character and has a fixative effect on the other constituents.

Pharmaceutical Cocoa Syrups

Eleven different formulas of cocoa syrups, including the official one, were evaluated statistically for taste preference by an untrained panel of thirty subjects according to A. W. Reid and C. H. Becker (*J. Am. Pharm. Assn. Sci. Ed.* 45:151, 160, 1956). Some cocoa syrups contained an added flavor such as salt, imitation butterscotch, and imitation rum concentrates. Others were prepared by the cold process instead of the hot, and some syrups were prepared using Dutch process cocoa. These were compared with CaCao Syrup, U. S. P. The official syrup, alone or with the addition of cocoa butter, was preferred for taste.

Eleven different formulas of cocoa syrup were used to determine statistically which would best mask the taste of quinine hydrochloride. These were compared with cocoa syrup U. S. P., and syrup, U. S. P. Tests made to determine whether the addition of flavors or varying the method of preparation would improve the disguising power of cocoa syrups showed that ten of the eleven cocoa flavored vehicles prepared were significantly better disguising agents than the official cocoa syrup. Three syrups made with Dutch process cocoa showed the highest disguising potentials. All cocoa syrups tested were significantly better disguising agents than syrup, U. S. P.

Aging Ambergris Infusion

A freshly prepared ambergris infusion (sometimes known also as "tincture" or "extract") has hardly any odoriferous value and no fixative and mellowing properties at all. The infusion must be kept in well-stoppered bottles with frequent shaking at warm room temperature (about 25° C.) for nine to twelve months to mature, and thus acquire its outstanding properties, before filtering from the insoluble sediment.

It has been found that the characteristic, long-lasting ambergris odor of well-matured infusions is the result of a constant autoxidation of ambrein with the formation of the volatile oxidation products, dihydro-gamma-ionone and ambreinolid, this being probably catalyzed by the small amount of copper contained in ambergris. Both oxidation products possess together the very fine, typical and long-lasting odor of ambergris.

A number of methods for hastening this indispensable process of maturing has been suggested, but so far without any marked result. In the experiments carried out by Strausz, attempts were made to accelerate maturation of ambergris infusions by means of artificial oxidation. Experiments with more powerful oxidizing agents gave poor results or caused the ambergris odor to disappear. However, the addition of a 20 volume per cent solution of hydrogen peroxide to a freshly prepared three per cent alcholic infusion of finest silver-grey ambergris, has shown a marked success in hastened maturing.

These materials were kept at about 25° C. room temperature in a tightly stoppered bottle and shaken each day for a few minutes. After six weeks the mixture was filtered. The filtrate was compared with a 12 months' old, fully matured, filtered infusion of the same quality ambergris. Delicacy and strength of the typical ambergris odor were identical on absorbent paper strips, both immediately and after "airing" at ordinary room temperature for three months, indicating the same duration of evaporation, or the same fixative value.

Eucalyptus Oils

There are over 500 species and 138 varieties of the Eucalyptus genus, of which about 180 have been examined for essential oils. Of these, only about 20 yield oils of commercial value.

Many species yield oil containing cineol in varying quantities, up to 85 per cent or more. *Eucalyptus polybractea* yield one of the finest quality oils. It is therefore, used extensively for commercial purposes and in the manufacture of pure eucalyptol.

There is a wide range in the composition of the essential oils among the 500 species. Beside the oil used for medicinal purposes, the eucalyptus oils have an equally wide application in their uses, from the separation of minerals by the flotation process in the mining industry to the manufacture of synthetic menthol, thymol and otto of rose. Oil of *E. citriodora* and oil of *E. Macarthuri* are used in the perfumery and soap industries while oils containing phellandrene are also used in the manufacture of disinfectants because of their high germicidal value.

Sesili Indicum

Steam distillation of the finely powdered dry seeds of *Sesili indicum* yielded 2.5 per cent of a limpid, almost colorless oil which had an aromatic odor and clove-like taste. The oil consists of 45 to 50 per cent of terpenes (mainly limonene), two per cent of acids, and 1.5 per cent of lactonic and phenolic substances. The oil also contains some sesquiterpenes and sesquiterpene alcohols, as well as some other alcohols, esters and acids.

(Continued from page 753)

cent water-alcohol solution. The large amount of alcohol generally used would have to be sacrificed and it would be worth watching to see if this sacrifice would be acceptable to the market. As far as I know, this is the first time such a departure has been made by a nationally advertised line.

The deodorant and antiperspirant preparations have become so popular among men that they now appear as pointed towards men. The purely deodorant preparations, by which I mean those whose function it is to prevent odor associated with perspiration from developing, have as their principal active ingredient a bacteriostatic agent to prevent odor formation. The theory behind this idea, which has been found to be quite sound, is that surface bacteria are responsible for the degradation of perspiration into odor-forming compounds and if these flora are inactivated, no such degradation would take place. There are a large number of agencies which are being used for this function, their choice being dependent on the vehicle into which they are incorporated.

There are a large number of different forms in which the deodorant cream is marketed, but the one that is currently increasing in popularity is the stick. This is an outgrowth of the old stick cologne and is basically a jellied alcohol in which sodium stearate is used as the gelating agent. The introduction of a bacteriostat makes it possible to apply a film which after evaporation leaves a dry residue. It is easily applied, which is believed to be the reason for its great popularity. The active agents used cover a wide field, the most popular being the chlorinated phenols such as the well-known hexachlorophene. In other types of preparations, such as clear liquids and in some creams, they range from the use of formaldehyde to the quaternary ammonium compounds. More recently patents have been issued on the use of zirconium salts for this purpose. Indeed, in a new patent recently issued, antiperspirant claims have also been made.

Antiperspirants have always been a problem since in order to have them function according to theory, a physiological change must also be effected. Their activity, according to theory, depends on blocking the sweat pores by precipitation of the surface skin proteins. Too severe a treatment could easily lead to irritation and therefore most manufacturers aim at a partial block and a resultant slowing down of the perspiration rate at the source of application. Most people do not perspire excessively and this partial block is therefore sufficient, but there are still a large number who do not respond satisfactorily. Aluminum salts (until there is more of a record on zirconium salts) are still considered the best agents, the favorites being the aluminum chlorhydrol, which is a complex salt of aluminum hydroxide and chloride, and aluminum sulfate. The cream form is still the favorite but attempts are being made to introduce aluminum salts into the

(Continued on page 842)

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Trade Literature

Anhydrides

A new booklet on anhydrides has been published by Carbide and Carbon Chemicals Company, 30 East 42 Street, New York 17. The booklet (F-5280) gives complete information on acetic anhydride, proprionic anhydride, and butyric anhydride.

Color on Shippers

Jas. H. Matthews & Co., 3842 Forbes Street, Pittsburgh 13, has issued a four-page folder entitled Color Magic for Corrugated. The brochure explains how manufacturers using corrugated or solid fibre shipping containers can economically produce the effect of as many as seven printed colors by using only three.

Public Relations

Public Relations and You is the title of a 12-page two-color, cartoon-illustrated booklet issued by the American Safety Razor Corporation, 380 Madison Avenue, New York. Included in the booklet are discussions of the five publics of prime importance to a company. They are: 1, the general public who buys the company's products; 2, the local community where the company has its home; 3, employees of the company; 4, stockholders of the company; 5, members of the trade who distribute and sell the company's products.

Non-Ionic Emulsifier

Witco 31, a general-purpose, nonionic emulsifier, is described in a technical bulletin issued by Witco Chemical Company, 122 East 42 Street, New York 17. It has a high degree of surface activity and disperses readily in many organic solvents. It is an emulsifier for fats, oils, some waxes and similar products generally forming oil-in-water mixtures.

Professional Pharmacist

A Survey of the Pharmacist as a Professional Man is the title of a booklet issued by the Health Information Foundation, 420 Lexington Avenue, New York 17. This booklet, authored by George Bugbee, president of the Foundation gives the findings of a survey conducted for the Foundation by the National Opinion Research Center of the University of Chicago.

Injectibles

A new catalog of injectibles is available from the Philadelphia Ampoule Laboratories, 400 Green Street, Philadelphia 23. It contains information on reserpine, hydrocortisone, B-complex with vitamin C, crystalline vitamin B_{12}, as well as many other items.

Mallinckrodt Reagents

Mallinckrodt Chemical Works, Mallinckrodt Street, St. Louis 7, is distributing a four-page folder giving the names and addresses of 94 dealers throughout the United States who carry stock of Mallinckrodt Analytical Reagents in 66 strategically located cities. Also in the folder is a card to send to obtain the 1956 catalog of these reagent chemicals.

Need for Soap

Soap Is Essential to Health, Welfare, and Morale, is the title of booklet compiled as reference material by the Cleanliness Bureau of the Association of Soap & Glycerine Producers, 295 Madison Avenue, New York 17. The various areas in which soap is useful are classified in nine sections: Health, germ chasing, atomic and biological warefare, first aid, skin diseases, food handling, comfort and morale, personal cleanliness and good grooming, and good business.

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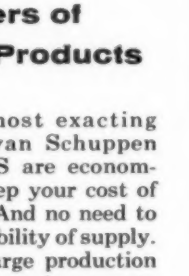

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Industry's Books...

A Dictionary of Dietetics, *by Rhoda Ellis, Ph D., Instructor of Foods and Nutrition, Department of Home Economics, Brooklyn College, N. Y., 152 pp., Philosophical Library, New York, (1956), cloth,* **$6.**

The Dictionary of Dietetics is a compilation of terms and references related to diet and diet therapy. It is of interest to both lay and professional people who are concerned about diets, nutrition and foods as well as dietetics. Particular emphasis has been placed on the practical application of diet with respect to the background, food habits, economic status as well as the physiological needs of people inside or out of the hospital environment.

Diseases of the Skin, *by Richard L. Sutton, Jr., A.M., M.D., Chairman o the Department of Dermatology, Universf sity of Kansas Medical Center, Eleventh Ed with 1972 Illustrations, 1479 pp., C V. Mosby Co., St. Louis, (1956), cloth,* **$29.50.**

The Eleventh Edition of Diseases of the Skin has been modernized to accord with medical literature through the date of closing the galley proof. It is comprehensive, yet condensed. It aims primarily at usefulness. The illustrations, 1,972 in number, are an atlas wherein all ordinary and many extraordinary dermatoses may be identified. The book includes features of a dictionary and an encyclopedia. It is a guide to the maze of what may be found, if one knows where to look, in an extensive medical library. It is a systematization of what is known about its subject, written from the viewpoint of a practicing physician who is inquisitive.

Chemical Market Research in Practice, *Edited by Richard E. Chaddock, Director of Development Virginia Cellulose Department, Hercules Powder Co., 196 pp., Reinhold Publishing Corp., New York, (1956), cloth,* **$3.**

Written by twenty-two experts of the Chemical Market Research Association, this book answers the need for up-to-the-minute information on the theory and practice of chemical market research. Every phase of the subject from the evolution of chemical market research, its relationship to basic research, products and markets to actual case studies is covered in full detail. Nine chapters and seven case studies are devoted to organization, personnel, market surveys, literature, field work and reports. The material of this book was presented originally as lectures given at Case Institute of Technology and the University Extension Division of the University of Delaware

Modern Chemical Processes, *A Series of Articles Describing Chemical Manufacturing Plants, by the Editors of Industrial and Engineering Chemistry, Vol. IV, 202 pp., 8" x 11" Illus., Reinhold Publishing Corp., New York (1956), cloth,* **$5.**

Volume 4 contains the same factually authoritative pattern laid down by its predecessors. Nineteen recently developed chemical processes, all now in operation on a full-scale production level, are described in the light of the following essential details: background, including commercial and technical history and the origin of present installation; description of plant installation, including design details of non-standard items; description of process and operation of plants; economics of process, including raw materials and processing cost breakdowns, plant investment and amortization; personnel; and future prospects, including technological improvement of the process and changes in the industrial picture.

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Readers' Questions . . .

Antiperspirant Cream and Liquid: *I would like some further information concerning the subject of the enclosed clipping from the June 1938 issue of "Drug and Cosmetic Industry." The clipping is self-explanatory and I wish to know if this is a reliable and dependable antiperspirant preparation. If so, would you be kind enough to indicate a simple formula for a liquid and a cream?* HOLLYWOOD.

The clipping enclosed recommended the use of aluminum acetate or basic aluminum acetate as an antiperspirant and these compounds, it is true, are effective antiperspirants. However, the statement that solutions have an easily covered acetic acid odor is incorrect; several earnest attempts have been made by skilled perfumers to cover the odor and none has been at all successful. In eighteen years real progress has been made in the matter of effective aluminum antiperspirants that do not tender cloth, however, and the aluminum chlorhydrate complex now widely used is an effective astringent at a pH that is high enough to eliminate action on fabrics. A fifteen or twenty per cent solution is readily made and can be perfumed to suit your taste. A cream can be made from 15 ounces of non-emulsifying glyceryl monostearate, 5 ounces of glycerin, one once of sodium lauryl sulfate, 15 ounces of aluminum chlorohydrate complex and 65 ounce of water. Dissolve the aluminum compound in about 20 ounces of the water with vigorous stirring. Meanwhile heat together all of the other components with stirring to about 70° C., add about 1/8 ounces of methyl paraben as a preservative, stir until the temperature drops to about 40° C. and slowly stir in the aluminum salt solution. The perfume, about ½ ounce of a preparation recommended for this purpose by your supplier, is finally added with stirring.

Discolored Cream: *We are producing a hand cream containing ammonium stearate, arachis oil, lanolin and glycerin. This cream tends to turn yellow on storage. Would you advise on possible preservative materials that could be used to prevent this. We know that ammonium stearate creams have a tendency to turn yellow, but we would like to delay discoloration as long as possible. We would like to say that the very high standard of your journal never fails to keep us interested and informed.* JOHANNESBURG.

The obvious solution to your problem is the use of the chemical equivalent of potas-

sium hydroxide instead of ammonium hydroxide, making adjustments as required to arrive at the same consistency. Otherwise, it is possible that the discoloration is an oxidative degradation. This might be prevented by the use of an antioxidant (one that itself does not undergo discoloration at an alkaline pH). A small proportion of sodium sulfite, or an oil-soluble substance such as butylated hydroxyanisole may be used in conjunction. Perhaps the use of a stearic acid fully hydrogenated so that it is free from even traces of unsaturated fatty acids may be helpful.

Adjusting pH: *I make a scalp preparation which has a pH of 5.5 and would like to increase this value to 6.5 or 7.0. Could you tell me what buffering agent to use and what proportion to use to make the adjustment?* ST. LOUIS.

In pharmaceutical compounding I have almost always found a mixture of sodium citrate and citric acid to be a satisfactory buffer in the region about neutrality. I suggest that you use a mixture of 10 parts of sodium citrate and one part of citric acid and add from one to two per cent to your preparation. The final preparation should be checked with a pH meter and adjustments made by increasing the proportion of citric acid for lower pH values.

Suspensions: *Have you any suggestions for making stable suspensions with insoluble ingredients that tend to float rather than settle?* ATLANTA.

Floating may be due to lower specific gravity of the suspended material as compared with the vehicle; reduction of the specific gravity of the vehicle where possible will then reduce the tendency of the suspended solid to float. Very often the solid floats because of occluded air and this can usually be overcome by the use of an appropriate wetting or dispersing agent. Extreme reduction in particle size will also reduce the tendency of the particles to rise in the liquid. If these obvious approaches are unsuccessful, the use of a modified bentonite to make a thixotropic mixture in which the migration of particles is greatly retarded is your last recourse.

These, I hope practical suggestions are all directly derivable by application of Stokes's law concerning the movement of a solid in a liquid under the influence of gravity. The rate of movement is directly proportional to the difference in specific gravity between the liquid and the solid, and occluded air has the effect of reducing the specific gravity of the particles. Halving the particle size will result in one-fourth the rate of fall (or rise), while increase in viscosity is reflected in a nine-fold decrease in the settling rate.

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CLINICAL INVESTIGATIONS HAVE INDICATED THAT MODULAN IS HYPO-ALLERGENIC.

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(*Continued from page 751*)

plain. Thanks to the new products resulting from this research, the Company's sales in the past five years have tripled. The mean expenditure was 21.1 per cent for the pharmaceutical companies. The mean for the other group of chemical companies was 15.3 per cent.

Thus the concensus among pharmaceutical manufacturers seems to be that out of the money they have left to provide needed capital funds, pay dividends and conduct research, they should spend something over 20 per cent on research.

It is interesting to note that out of this same amount these same companies distributed 27 per cent to their stockholders by way of dividends. The comparison is not strictly correct, of course, because the amounts spent on research are under the present Revenue Code deductible for tax purposes, whereas the amounts retained in the business even for the most essential capital purposes or paid out in dividends are not. Thus it really takes twice as much of the company's, i.e., the stockholders', money to pay a dividend or make an addition to capital assets as it does to put an equal amount into research. Looked at from this point of view, which is the true one, stockholders are getting double the value from money put into research than from that invested for them in other ways or paid out of them in dividends. It is no wonder, therefore, that stockholders do not complain when they are told in annual reports that their companies' research expenditures approached the amount paid out to them as dividends.

Neither the percentage of sales spent on research nor the percentage of the amount left after meeting other operating expenses of the company is the only or even the best way of measuring a company's research effort. Enough statistical information on other companies is not available to make it possible to generalize about what the rule in the industry is about how much of the total company effort is devoted to research, but I can tell you how much of our effort in CIBA Pharmaceutical Products is devoted to this purpose. In this connection it is interesting to note that our relative, as well as our absolute, research effort is steadily increasing with the passing of the years.

Thus, for example, ten years ago only 12 per cent of our employees were in the Research Department, whereas today the figure is 19 per cent. During the same period our Research Department payroll as a percentage of the total company payroll has risen from 14 per cent to 20 per cent. Ten years ago only 12 per cent of our total fixed assets were used for research purposes. Today 35 per cent of our fixed assets are devoted entirely to research.

The mention of fixed assets used in research brings out an important point in planning a research program, and that is how much it is going to cost to provide the laboratories, pilot plants, equipment and other facilities needed to carry out the program. These are expensive. It would not be difficult to put a quarter of a million dollars' worth of equipment into a single laboratory. A suitable building with equipment to study high-pressure reactions can cost even more. And a pilot plant needed to carry out any worthwhile program of research in the field of antibiotics and fermentation chemistry costs several million dollars. On the average we have found that $75,000 must be invested in buildings and equipment for each scientist of the Ph.D. level engaged in research. Thus the funds required to provide the research facilities are an important part of the capital budget. In the CIBA pharmaceutical subsidiary in the United States, of the total amount spent in the past ten years for all capital assets 36.8 per cent was spent on facilities for the Research Department. As we are particularly "research-minded" and in all of the methods suggested above for measuring research effort we rank near the top, it is possible that this figure is somewhat on the high side. It would, however, surprise me if the average industry figure showed that less than 30 per cent of total capital expenditures was over a period of years spent on research facilities.

Up to this point we have talked only in terms of percentage. We have seen that in the pharmaceutical industry, although there is no magic formula for determining the relative magnitude of the research effort, the research program is usually based on the general principle of devoting about 20 per cent of the company's expenses, payroll and manpower and about a third of its physical assets to research.

We must now consider the actual dollar amounts that will be made available, because the amount of dollars that a company can make available for research determines the number of specially trained scientists it can employe and the physical facilities it can provide for them, and thus has an important bearing on the type of research program it can undertake. For example, to carry out a reasonable project of antibiotic research would take many times the amount of money needed to conduct a worthwhile investigation in the sulfa drug field.

Of the companies whose figures have been used herein to illustrate research planning in the pharmaceutical industry, one spent $8,500,000 on research in 1955, several spent upwards of $7,000,000 and the smallest research budget was slightly over $1,000,000. It would be wrong to say that a research effort costing less than $1,000,000 a year would not be worthwhile, but it would certainly have to be concentrated on a narrow field. We have found that the laboratory costs per Ph.D. research scientist (for depreciation, maintenance, lab assistants, stock room cost, etc., but excluding research administration, outside grants, library and patent expenses) average $45,000 per year. Thus, if the average Ph.D.'s salary is $15,000 per year, a million dollar research budget would support about fifteen or sixteen Ph.D. research scientists and the number of projects they could undertake would be very limited. This is because experience has shown

that research in the pharmaceutical industry should not be spread too thinly over too many fields of activity.

(c) *Diversity of Scientists Required for Pharmaceutical Research*

The reason for this is apparent when one considers how many different types of scientists must collaborate in the discovery and development of a new pharmaceutical product.

First chemists must synthesize, extract, isolate or otherwise produce a chemical compound, or, more likely, a series of related chemical compounds, and because of the high degree of empiricism that exists in medicinal chemistry the series of related compounds to be investigated in any given project is usually a long one.

These compounds must be investigated by biologists to determine their pharmacological activity or their power to destroy bacteria or other disease-causing organisms. Now, with the recent revolutionary discovery that mental disorders may successfully be treated with drugs, testing by psychologists will have to be undertaken as well. This phase of the work is very complicated and to do it thoroughly requires that each chemical compound be tried out in great numbers of very delicate experiments. After one or a series of active compounds has thus been identified, exhaustive tests must be carried out to determine both their acute and chronic toxicity and indeed what effect they may have on virtually every organ of the body. Pharmacists must study their compatability with the other chemical products used in putting up pharmaceutical preparations and determine their most effective and convenient pharmaceutical form. If already proven methods do not exist for manufacturing the products on a commercial scale, other chemists and chemical engineers working in laboratories and pilot plants must work out the manufacturing processes. Finally physicians must conduct extensive and carefully controlled clinical trials with the product in human beings, usually in several thousand as a minimum before a new product can be put on the market. All of this work requires large and diversified staffs and facilities and years of work.

Thus the size of the research budget will have a great bearing on the scope of the program that can be undertaken by the research force and even the possible fields that can be included. A small budget would automatically exclude from consideration any mass production operation, as for example, the massive screening of hundreds of thousands of soil samples to find new antibiotics, for this work is done on the theory that success is a matter of the probability of occurrence of a few effective products out of the hundreds of thousands tested.

(*To be concluded*)

Glycerine Research Awards

The Glycerine Producers Association announces that the fifth annual Glycerine Research Awards are now open and nomination blanks are available from the association at 295 Madison Avenue, New York 17.

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(*Continued from page 834*)

stick. The usual soap-alcohol gel does not serve in this case because aluminum would precipitate under these conditions, but with the great number of raw materials available, I think that this will be solved in time. Indications are that some manufacturers have already solved this problem. Sodium zirconium lactate is currently being used in a soap alcohol preparation for which antiperspirant claims are made. The composition is patented, but the literature is not at all clear as to the efficacy of zirconium salts as antiperspirants. A good deal of work is therefore in process on the use of aluminum salts as the active agent in a stick preparation while still keeping the aluminum in soluble and therefore active form.

A.D.M.A MEETING

(*Continued from page 775*)

"It is in the foreign field that we may expect the unexpected. The rising tide of economic nationalism in many countries, complicated by communist propaganda, can bring forth many problems to trouble our industry, in addition to those simply involving taxes and patents."

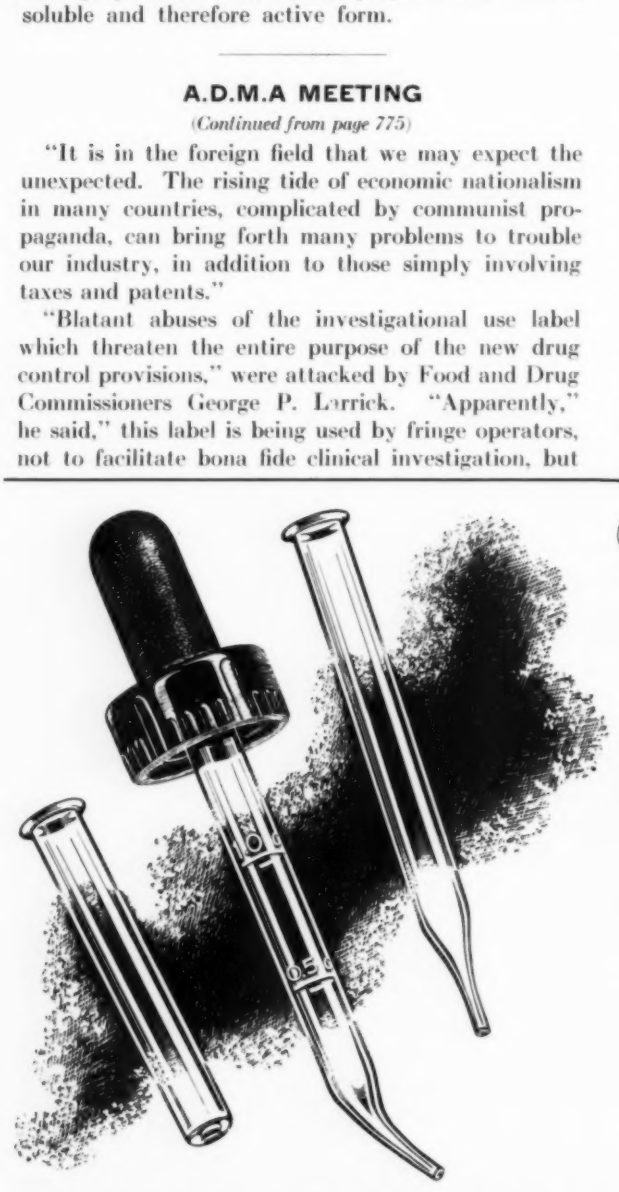
"Blatant abuses of the investigational use label which threaten the entire purpose of the new drug control provisions," were attacked by Food and Drug Commissioners George P. Larrick. "Apparently," he said," this label is being used by fringe operators, not to facilitate bona fide clinical investigation, but as a legal loophole for promoting some questionable products."

Commissioner Larrick promised drug manufacturers "full opportunity to comment fully on any proposed change in this part of the regulations," saying that he hoped the industry would cooperate with its advice in much the same way it did when the new drug application procedures were proposed.

Commissioner Larrick lauded the Combined Contact Committee of the A.D.M.A. and the A.P.M.A., citing the work of this committee as "an example of fine industry-government cooperation which has become a model for our other relationships with industry."

The likelihood of biological warfare conducted with the use of aerosols clouds raises problems not associated with treatment of diseases acquired through convential route, Major General William M. Creasy, Army Chief Chemical Officer, told the meeting "We might consider," he said, "as a possible challenge for research, a consideration of whether our present-day vaccines for a disease normally contracted through drinking water would be effective if this disease were conducted through the respiratory tract as a result of an aerosol cloud."

Among the questions that must be answered, said General Creasy, are the effect of length of time between inhalation and the start of therapy, the value of pre-existing immunization, the effect of simultaneous immunization and chemo-prophylaxis, the importance of drug-resistant strains and the duration of



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prophylactic treatment and daily dosage necessary to prevent re-dosage. There are also other questions which must be answered, he said.

Reporting for the Medical Section of the association, Dr. Elmer L. Severinghaus, of Hoffmann-La Roche, said this section is working on "the professional aspect of public relations between the industry and the medical men of the immediate future." "We have been striving," he said, "to foster the development of doctors trained in the difficult techniques and rigorous thinking of clinical investigation. This is essential within the ranks of medical men in industry and in the teaching and research hospitals where we must continue to seek the evaluation of our newly discovered remedies."

The Medical Section, said Dr. Severinghaus, is prepared to support a fellowship for training and clinical research. In addition, it is seeking opportunities to tell medical students and internes and residents about medical work in the pharmaceutical industry.

In presenting the report of the Pharmaceutical Contact Section, Dr. Frank O. Taylor, of Parke, Davis & Company, said it was engaged in the following subjects: drawing up of an extensive report on the assay of folic acid in complex mixtures; tests for rubber used in closures for multiple-dose packages of injections; possible standards for plastic containers for blood; recommendations for changes in the assay of oleovitamin A; improvement of standards for time integration tablets; tests for reserpine.

Dr. Ernest Volwiler, president of Abbott Laboratories, was elected president of the association for the coming year. Elected as vice-presidents were: L. D. Barney, president of Hoffmann-La Roche; Francis Boyer, president of Smith, Kline & French Laboratories; James J. Kerrigan, chairman of the executive committee of Merck & Co.; and Kenneth F. Valentine, president of Pitman-Moore Company. Melvin C. Eaton, chairman of the board of Norwich Pharmacal Company, was reelected treasurer.

Elected to the executive committee for three-year terms are: J. H. Fitzgerald Dunning, president of Hynson, Westcott & Dunning, (retiring president); Joseph Fistere, president of Mallinckrodt Chemical Works; Harry J. Loynd, president of Parke, Davis & Company; and George F. Smith, president of Johnson & Johnson.

Continuing to serve on the executive committee for two more years are: Eugene N. Beeseley, president of Eli Lilly and Company; Dr. Theodore G. Klumpp, president of Winthrop Laboratories; and Weed G. Malcolm, president of Lederle Laboratories.

S. B. Penick Jr., president of S. B. Penick & Company, was elected to a one-year term on the executive committee to replace W. L. Dempsey who is no longer in the drug industry. Other members with one year to serve are: Leslie D. Harrop, The Upjohn Company; and John C. Leppart, president of E. F. Squibb & Sons.

Six past presidents will continue to serve on the committee for life or as long as they are connected with their companies: S. DeWitt Clough, Abbott

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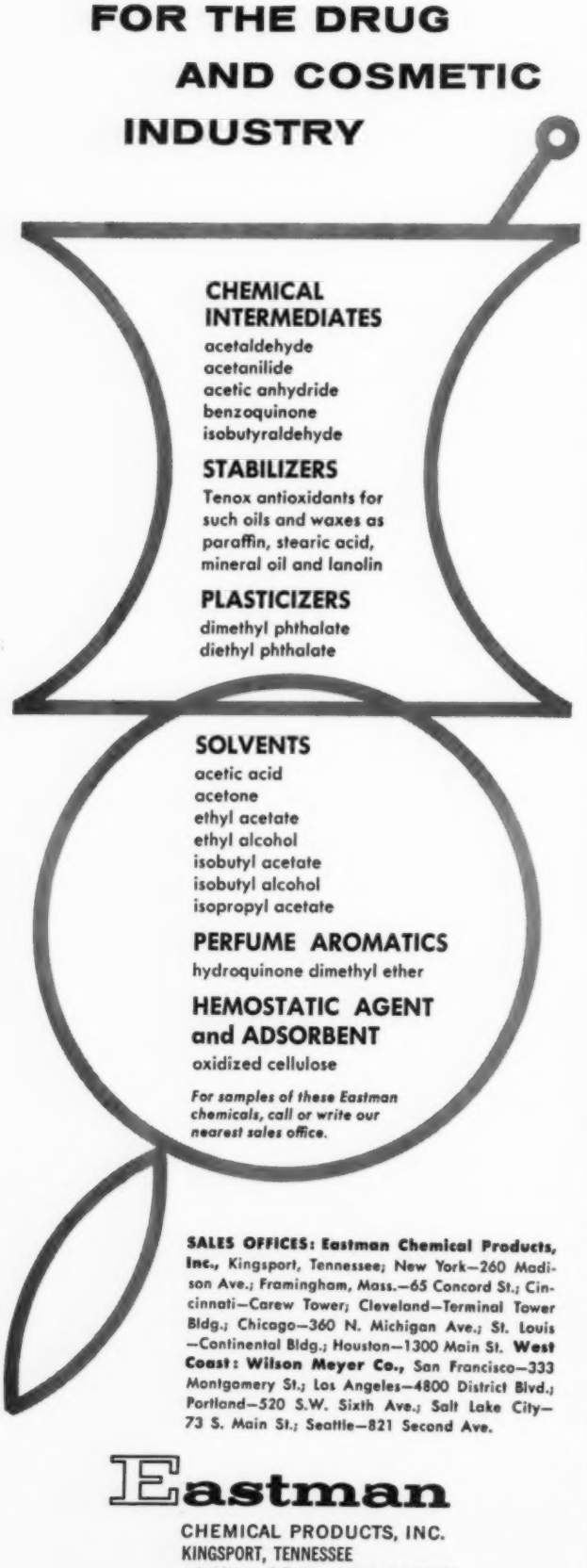
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Laboratories; Donald S. Gilmore, The Upjohn Company; Adam H. Fiske, Eli Lilly and Company; R. Lincoln McNeil, McNeil Laboratories; and John S. Zinsser, Sharp & Dohme Division of Merck & Co.

In the golf tournament, the President's Trophy was won by George R. Cain, Abbott Laboratories, for tournament low net. Tournament low gross was won by Charles A. Dunning, Hynson, Westcott & Dunning, and qualifying low gross was won by John G. Searle, president of G. D. Searle & Company.

PROPRIETARY ASSOCIATION MEETING

(*Continued from page 757*)

"Realization of a revolution in being came gradually. It was given impetus and definiteness by the Durham-Humphrey Amendment, sponsored by the National Association of Retail Druggists. As so amended, the law became clear without question that packaged drugs which are capable of being labeled for over-the-counter sale must be so labeled and that others must be restricted to prescription dispensing. Ironically, the retail pharmacist now fears that his handiwork may lead to the distribution through non-drug outlets of products heretofore confined to sale in drug stores.

"Such fear has led the State Pharmaceutical Associations in New York and New Jersey to propose desperate measures for accomplishing a wide restriction of drug products to sale in drug stores. They have proposed to their legislatures that drug products which bear warnings with respect to excessive dosage, frequency or duration of administration should be excluded from the exemption pertaining to the sale of proprietary medicines.

"That proposition would prostitute the Federal Food, Drug, and Cosmetic Act and all the State statutes uniform with it. These statutes require that all drugs bear adequate directions for use and adequate warnings against use in those pathological conditions or by children where its use may be dangerous to health or against unsafe dosage or methods or duration of administration or application.

"Manufacturers have gone the second mile in complying. They have included cautions beyond what the law may strictly require. They have tried to meet the spirit as well as the letter. Warnings are demanded by the law for the information and the guidance of the consumer, not for the competitive commercial advantage of any distributor. It would be a dreadful and tragic thing for any State to legislate that all articles bearing these warnings should be restricted in sale. Thus, instead of a premium upon thoroughgoing compliance with the Federal statute, such a State law would lay a penalty and consequently constrict the consumer protection intended by the food and drug laws."

In forecasting the next twenty-five years, Dr. Rice pointed out that heart disease accounts for almost 350 and cancer nearly 150 deaths per 100,000 population. "Others lethal disorders fade into relative ob-

security in comparison—all of them having death rates below 40 per 100,000," he said.

Diseases responsible for the highest disability rates, said Dr. Rice, are, first, mental disease "which keeps more of our hospital beds occupied than all other diseases combined. At the present rate in one out of every three families some type of mental disorder will appear during a lifetime." Next comes "diseases of the joints and muscles sometimes classified generally as 'rheumatism' (which) claim a high rating as crippling disorders with numbers running into millions. Central nervous system disturbances, such as epilepsy, paralysis agitans and multiple sclerosis take their toll. Mental disease, arthritis and allied conditions and central nervous system disorders are all fruitful areas for research not because of their high mortality rates but because of the tremendous number of people made miserable and unproductive as their victims."

"Degenerative processes become evident in many parts of the body structure as age advances," said Dr. Rice. Surely much of our research will revolve around these tiny tissue cells and the metabolism within them, dealing with what one biochemist has called, 'The Miraculous Little Pieces of Life,' enzymes, hormones, vitamins, nucleic acids, amino acids and others. . . .

"Will the next twenty-five years bring a succession of new antibiotics to treat infection? This seems unlikely as the finding of antibiotic producing organisms becomes more and more difficult and as the success of now available anti-infectives becomes more and more evident. Penicillin and the several antibiotics which followed have come near to eliminating pneumonia, staphylcoccus and streptococcus infections as prominent causes of death but a few organisms remain which have not yielded to antibiotic therapy. Outstanding among these are the small viruses which are involved in poliomyelitis, influenza, respiratory infections, measles, mumps and others. Experience with vaccination against smallpox, poliomyelitis and influenza suggests that this may be the way in which other virus diseases eventually will be controlled. However, antibiotic substances have been found and are now under study which have a lethal effect on several small viruses. One day we may see successful application of such agents in virus diseases just as we now see the pneumococcus eliminated by penicillin, the tetracyclines and erythromycin."

Sherwood E. Silliman, secretary and general counsel of Vick Chemical Company, was elected president of the association for the coming year. Vice-presidents elected are: Robert B. Brown, president, Bristol-Myers Products Division; Joel Y. Lund, president of Lambert-Hudnut Division, Warner-Lambert Pharmaceutical Corporation; and Dewey S. Mims, B. C. Remedy Company.

Members of the executive committee elected to serve three years are: Melvin C. Eaton, chairman of the board, Norwich Pharmacal Company; Stanley I. Clark (retiring president), vice-president of Sterling

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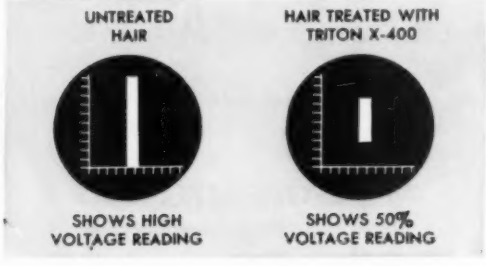

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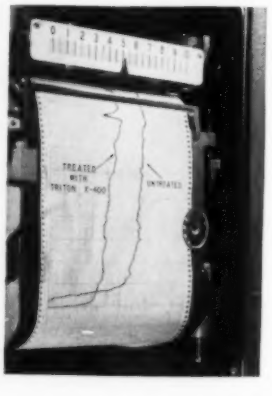

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Drug; Hermon A. High, vice-president of Vick Chemical Company; Lupton Patten, president of Chatanooga Medicine Company; and Daniel R. Pinkham, vice-president of Lydia E. Pinkham Medicine Co.

Members of the executive committee elected to serve two years are: William F. Laporte, president of Whitehall Pharmacal Company; and Harry H. Hoyt, president and treasurer of Carter Products, Inc.

T. G. A. MEETING

(Continued from page 758)

"The trend to development of new products and the broadening of the cosmetics and toilet goods base through research continue at a high pace. Continuing research, which helps to *adapt* new discoveries and developments in all fields of cosmetics and toiletries, gives proof of the foresight and ingenuity of our industry. Research on cosmetics, fragrances, and toiletries of all kinds has not been limited to our own technical laboratories and offices. Suppliers of our essential products and materials have rendered us invaluable help. We are grateful for this and we know we can count on them for sizable contributions for years to come.

"There is increased recognition of the need for more basic research in the distribution fields and many organizations are broadening their efforts to provide better guides for doing business. As our sales increase, our distribuion depends more and more on basic research of consumer markets and distribution techniques. We are concerned with a new and ever changing market, not with a static economic climate. Population is not only increasing but is constantly shifting. Good roads and increasing numbers of vehicles have caused a continuing mass migration to outlying areas. Consumer incomes, attitudes, and needs are changing rapidly. The broadening of market research makes it abundantly clear that we are conscious of the fluidity of our market and have the foresight to keep ourselves as well informed as it is possible to do with the techniques available."

Speaking on the importance of "word-of-mouth salesmanship," Will A. Foster, vice-president of the Borden Cheese Company, discussed ways of helping to cultivate the kind of sales help for which the manufacturer does not pay. The first step in building this important asset, according to Mr. Foster, is to teach its value and importance to those who work for you and stressing that not only employee loyalty but employee loyalty plus enthusiasm is the important factor. He also pointed out that uncompensated salesmanship can be derived from stockholders of a larger company by a proper program of stockholder education and perhaps sampling to stockholders. Of even more importance, said Mr. Foster, is to develop loyalty in present customers. Such customers will recommend you without any thought of compensation.

Mr. Foster listed the human motives that cause individuals to turn their efforts toward supplying this uncompensated salesmanship, as follows: 1.) A desire

to share; 2.) A desire to help 3.) A desire to impress; 4.) A desire to justify; 5.) A desire to belong; 6.) A desire to boast.

Both public relations and advertising can be used to produce word-of-mouth salesmanship, said Mr. Foster. The qualities in advertising which have the greatest influences are credibility, newsiness, humaneness, sincerity, helpfulness, and conviction.

Speaking on What It Takes to Be a Manager, John M. Fox, president of the Minute-Maid Corporation, said that the days of the individual or "prima donna" manager are receding into the background, and that modern business needs management teams. He noted six foremost qualities that should be present in a man destined to command in business. The first quality, he said, is creative ability, but he noted that creative ability should be accompanied by judgment and sound thinking. This quality, he indicated, can be developed by the individual, who should take every opportunity that presents itself to build and execute his judgment. Administrative skill is a third quality, said Mr. Fox, who pointed out that the company executive must be able to foresee the needs of his operation and forecast its requirements in men, materials, money, and time. A fourth important quality in a manager is a positive attitude. The manager must be optimistic and must radiate confidence and enthusiasm. A further important weapon against worry and pessimism is faith, in the people who have been assigned to important jobs, faith in oneself, and faith in God.

A fifth quality to be sought is courage. A manager must be a man who will gamble, not in the Monte Carlo sense of the word, but in the sense of taking a risk, perhaps before all necessary facts and data to make a risk-free decision are at hand. The sixth and final quality is character. He said that the manager must be a man of high integrity and humility.

"Brainstorming," a new technique for developing ideas, was described and demonstrated by Willard A. Pluethner, vice-president of Batten, Barton, Durstine & Osborn. The four rules which make a "brainstorm" session different are:

1. Judicial judgment is ruled out. Criticism of ideas must be withheld until later.
2. "Free-wheeling" is welcomed. The wilder the ideas, the better. It is better to tame down than think up.
3. Quantity is wanted. The greater the number of ideas, the more likelihood of winners.
4. Combination and improvement are sought. In addition to contributing ideas of their own, participants should suggest how ideas of others can be turned into better ideas, or how two or more ideas can be joined into still another idea.

Brainstorming is being used by Bristol-Myers Company; Rexall Drug Company, Johnson & Johnson, E. I. duPont de Nemours & Company, Campbell Soup Company, International Salt Company, and General Electric Company.

Records show that in a brainstorm session the par-

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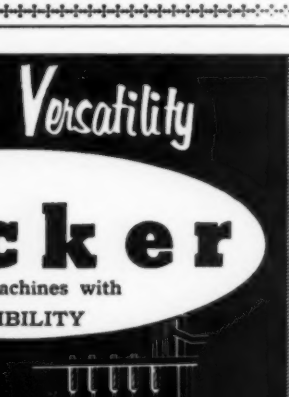

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ticipants develop at least three times as many ideas as they would have created if they had worked on the problem in their own offices, said Mr. Pluethner. This is because of the association of ideas at the session, he said, because one idea sparks others from other participants.

Albert R. Jasuta, Unit Chief, Package Development Unit of Bristol-Myers Company, opened the packaging session with a discussion of the package from idea to production line. He pointed out that this transition includes: statement of the problem; presentation of possible solutions; evaluation, testing, and preliminary costing; development of sources of supply; final costing on both materials and methods; rating of potential packages followed by a choice; and lastly, preparation of specifications to the mutual satisfaction of both supplier and user. Drawing from his own experience to illustrate, he said that the Bristol-Myers approach is one of a dual team, consisting of a Package Committee and a Deal Packages Task Group.

The Packaging Committee oversees the packaging function, initiates and follows projects, and sets policy on packaging. The Deal Packages Task Group, working within policy set by the Packaging Committee, is charged with container development for deals and special promotions. Members of Production, Purchasing, Sales, and Development Departments comprise the membership of both groups. The dual team approach permits the interests of these diverse groups to be satisfied and permits an orderly and organized handling of projects and problems. To seek further improvement in packaging, Bristol-Myers maintains departments concerned with package development, as well as machinery and methods development.

F. L. Adams, manufacturing manager of Avon Products, Inc., discussed the operations of the small cosmetic plant and pointed out ways in which it could operate more efficiently. This efficiency was discussed under three general headings: 1. Supervision; 2. Layout, space and flow of work; 3. Material handling equipment. Mr. Adams discussed the limitations which are set for the choice of hand operation, semi-automatic machine operation, and fully-automatic machine operation.

William T. Ropp, president of Pack-It, Inc., discussed efficiency and economy in packaging operations. He also explained the place of contract packagers, and told of the information that must be given to allow these packagers to work out their schedules to the benefit of all concerned.

At the luncheon on May 16, the prizes for the Charles S. Welch Essay Contest were presented by Pierre Harang, chairman of the T.G.A. committee for this contest. The contest was sponsored by the Amos Tuck School of Business Administration of Dartmouth College on a grant from the T.G.A. First prize went to Tom Byrne for his paper entitled "Make-Up and The Girl in the Gray Flannel Shorts." Second prize went to Wolfgang Thumb for his paper, "Make-Up;

The College Girl's Secret Love or Hate?" Four other students honored for their essays are John J. Doyle Jr., Gustave C. Aberle Jr., W. M. Wilbur, and Kenneth Harvey. All six essays are to be published by the T.G.A. and distributed to members of the Association. Judges of the contest were Dean Upgren, of the Amos Tuck School of Business Administration, Thomas R. Farrell, Drug and Cosmetic Industry, and Dan Rennick, American Druggist.

At the final luncheon the annual award given by the CIBS for the best paper presented before the 1955 meetings of the T.G.A. Scientific Section was presented to Irvin H. Blank, Ph.D., of the Dermatology Department of Harvard Medical School at Massachusetts General Hospital. The award, presented by CIBS president David J. Warner, of Fleuroma, Inc., consisted of a scroll and a cash prize of $250. The award-winning paper was titled "Mechanism of Agents Used for relief of Dry Skin," and was presented before the May 12, 1955 meeting of the Section. Published in this magazine, June 1955, page 758.)

Pierre Harang, vice-president and director of Houbigant Sales Corporation, was elected president of the association. J. I. Poses, president of D'Orsay sales Corporation, was elected a vice-president. Re-elected as vice-presidents were Jean Depres of Coty, Inc.; A. R. Johnston of Colgate-Palmolive Company; and Charles T. Lipscomb Jr. of The J. B. Williams Company. Philip C. Smith of Yardley of London, Inc., was reelected treasurer, and William F. Denny Jr. of Frances Denny was reelected secretary.

New directors elected for a three-year term are John W. Cawley, president of The George W. Luft Company, Carl W. Gardiner, vice-president of Elizabeth Arden Sales Corporation, and D. H. Williams, assistant to the president, Sterling Drug, Inc.

Directors reelected to a three-year term are Robert E. Schwartz, vice-president of Wildroot Company, Benson Storfer, president of Parfums Corday, and L. B. Whitehouse Sr., vice-president of Mortom Manufacturing Corporation.

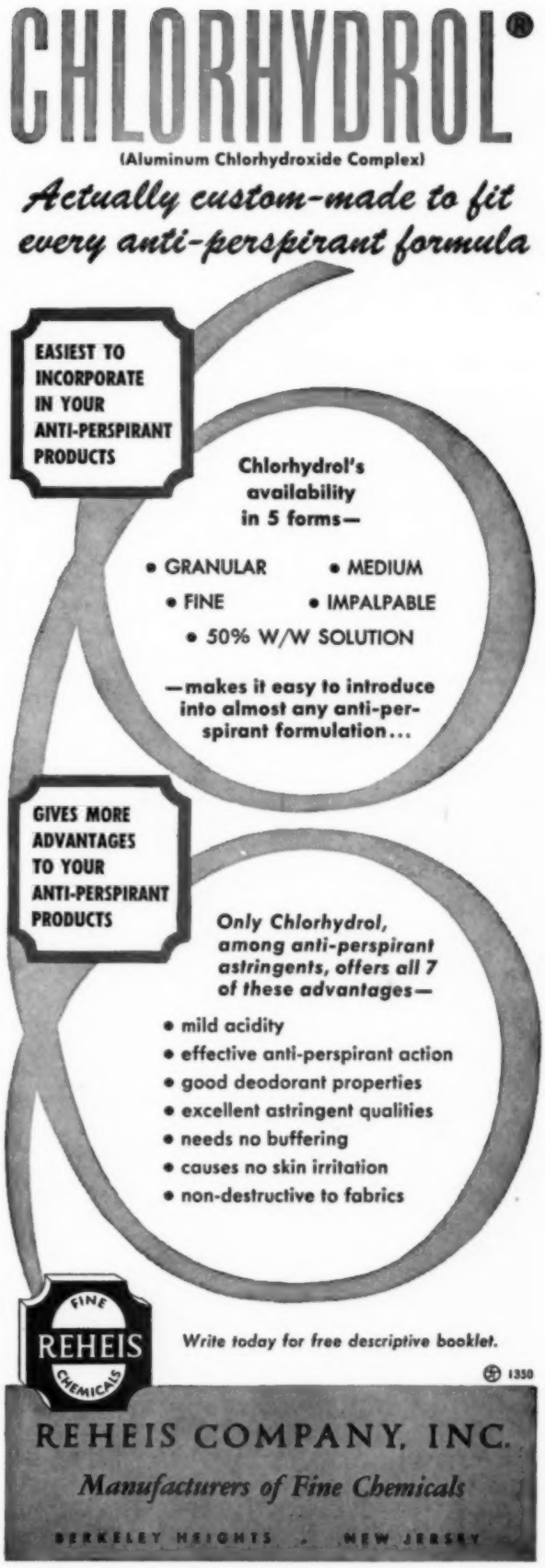
Directors elected to represent the associate members for one year are Gert Keller, president of Schimmel & Company, and Dr. Lloyd Hazleton, president of Hazleton Laboratories.

COSMETIC CHEMISTS MEETING

(Continued from page 760)

Materials in Thioglycolate Solutions," with M. Balsam as co-author. A study of a representative group of aromatic chemicals and essential oils in thioglycolate hair-waving solutions included consideration of the clouding agent used, the color, and the presence or absence of free ammonia. It was found that materials having a deleterious effect on a preparation when used as the sole perfume ingredient usually, although not invariably, adversely affect the preparation in the same manner when employed as one component of a blended perfume oil.

Dr. H. Henkin, supervisor of research on hair prod-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ucts at the Colgate-Palmolive Company, presented a paper "The Measurement of Static Charge on Hair," the work having been done with the collaboration of C. M. Mills and V. C. Ester. Several methods were used to estimate the relative electrostatic charge production on hair, or "flyawayness." An oscillograph camera was set up to estimate and record the voltage or charge produced by combing hair and the reduction in charge following the use of cream rinses. Data obtained with hair swatches and directly from models' heads showed a very substantial reduction in the static charge following the use of a cream rinse. The average duration of the antistatic effect and the effect of relative humidity were also determined.

The procedures, despite their reproduceability, are limited. Only inconclusive results were obtained in trying to determine the influence on the shampoo on the generation of the electric charge. The cationic rinse seems to work not by reducing the charge so much as by preventing its build-up, possibly by lubricating the hair.

Raymond E. Reed, vice-president of technical operations of the Toni Company delivered a paper on "A New Permanent Waving Process" that certainly did not live up to the promise of the title. No technical details were included in a historical presentation that listed the reduction in the number of steps from 15 in the process using a neutralizer to eight steps in a six hour process not using a separate neutralizer. The "new" process reduces the number of steps from eight to six, does not use a neutralizer, but still requires from six hours to overnight.

Dr. Sylvia Most, physiologist and toxicologist with the West Laboratories and Industrial Toxicology Laboratory, presented a paper "The Use of Iodophors in Cosmetics," prepared in collaboration with A Cantor and M. Shelanski. Iodine complexes of nonionic, anionic and cationic nature have been utilized in sanitation and pharmaceuticals and now they are being advocated for cosmetic application, specifically in shampoos. The limited literature on the application of iodine to human and animal hair, as well as therapeutic and prophylactic applications, were reviewed. Improved formulations using these iodine complexes have been made and clinically tested. The effect of these complexes on the chemistry of the hair and the response of treated hair to hair-setting chemicals was investigated and reported.

Dr. Paul W. Jewel, chief chemist of Max Factor & Company, discussed "The Analysis of Lipsticks" by a method depending upon the fact that each of the materials used in the manufacture of lipsticks is relatively soluble in certain solvents and less soluble in others. Modern techniques, including paper chromatography, are used in the procedure. Although the method will not give complete analytical precision, it will help the analyst to learn a great deal about the composition of any lipstick and facilitate duplication.

O. W. Neiditch, group leader in exploratory research

and in the development of oral products for Lever Brothers, delivered the paper "Laboratory Evaluation of Potential Caries-Preventive Agents in Dentifrices" which was co-authored by S. D. Gershon and D. J. Martin. This paper is concerned with the *in vitro* laboratory evaluation of potential caries-preventive agents intended for use in a dentifrice. The evaluation procedure utilized is based on the most generally accepted cause of tooth decay, i.e. acid decalcification of the calcified tissues of the teeth. A protein adsorption test, referred to as the "Modified Casein Test" was developed which permits quantitative screening results providing information on protein substantivity and subsequent acid inhibition ability of potential caries-preventive agents. The test is particularly useful in that it can be used both with solutions of compounds and with dentifrices containing the potentially active caries-preventive compound. The results obtained in the test demonstrate that compounds which show potential anti-caries properties in solution will not necessarily retain these properties when incorporated in a dentifrice.

The large number of compounds tested were divided according to their activity, from those with no activity to those that were apparently quite effective in preventing caries.

H. R. Shepherd, president of Aerosol Techniques, Inc., discussed "Some Practical Problems in the Formulation of Aerosol Hair Sprays." Seven factors must be considered in the formulation of hair products. These are the film forming constituents, plasticizers, hair conditioners, humidity modifiers, emulsifiers for water-insoluble films, perfume and propellent. When shellac alone is used in hair lacquers, the result is a hard, unnatural-appearing film. The use of polyethylene glycol monolaurate 400 and castor oil along with suitable lanolin derivatives provide a natural finish to the hair. These preparations ordinarily contain two to three per cent of shellac based upon the weight of the whole formulation; modifiers comprise about 10 per cent of the weight of the shellac. PVP is now used extensively in aerosol hair products; it is too soluble in water so that films are sensitive to moisture and are inclined to be tacky. These difficulties are overcome by the use of various lanolin derivatives, along with oleyl and cetyl alcohols and other plasticizers.

NEW PRODUCT DEVELOPMENT

(Continued from page 763)

When all of this work has culminated in enough information so that we feel we can proceed with the marketing of the drug, a most important decision must be obtained. A summary of the project and product is prepared, including the medical rationale for the drug, sales recommendations for marketing, together with all of the economics involved. All of this information, including other pertinent data, are incorporated in a single book which is then submitted to management for a decision on whether this product should be put on the market. If the answer is "Yes,"

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as it is in most instances when a project has been carried to this point, we then proceed to the phase which we call preparation for marketing.

To properly schedule a product for marketing and be certain that all of the loose ends are coordinated, it is necessary to tie together a number of items. It is necessary to set up a production schedule which is coordinated with the production department on the quantities, quality and timing. We must also clear a trade mark for the new product. A package design for the product must also be worked out by our package design department and the final design cleared with everyone concerned. A probable marketing date must be given to our advertising and promotion department so that advertising and promotion plans can be set up aimed at a definite target date. All of these activities must be coordinated so that when the product is available at a certain date for distribution, all areas of our company that are concerned with the introduction of this product know of it and can carry out their particular functions.

In our company, this involves a group of men who are called Coordinators of New Product Development. This group spends its entire time in coordinating the activities of all of the divisions of our company as far as new product development is concerned. They will usually get involved with a product at what I have termed the preparation for marketing phase. This phase, of course, will vary depending on the product, but usually it is at the time when the product looks hopeful in the clinics or even in the pharmacology screening program. They will then coordinate activities from this stage forward to the date on which the product is distributed to warehouses, wholesalers and retail druggists.

These men have been recruited from various divisions in the company, and the present group consists of men from Production, Sales, and Research. When a project comes up in which they should be involved, they immediately get all of the details concerning the product, the schedule of progress, and all of the pertinent scientific data. Their principal aim is to coordinate the activities of the various divisions of the company on this particular new product from the time that they become involved to the time it is marketed. This is done by setting up the various check points which a product must go through the use of on control boards.

With a pharmaceutical product, the various check points may number in excess of 100. When it has been definitely approved for marketing, they then must make sure that the package design work has been completed, the quality control specifications have been set up, the product cleared with FDA, the packaging materials and raw materials for production have been placed on order and that production time has been allocated in production units. Incidentally, the men in this group are official contacts with the FDA for our company.

These men do not issue orders for this particular

work to be carried out. It is their job, however, to see that these orders have been given. If they have not been given, it is their duty to report back to their supervisor who must then arrange with the proper people to have orders given. In the actual working of this group, it has been found that their coordination of production scheduling, or package design, or other functions is usually carried out with no further recourse to higher authority. This is a result of their willingness to cooperate with everyone concerned and the realization by everyone involved that their function is contributing to the overall good of the company.

In addition to the estimated sales performance which was included in the book submitted to top management for decision on marketing, we also have our cost accounting department prepare a review of sales and a profit and loss statement at the end of three months after introduction, at the end of six months, and also at the end of twelve months. This review is carried out to evaluate performance versus estimates, and is useful in several respects:

1. It gives management a picture of how actual sales compare with the sales estimates;
2. It can, in certain instances, if sales are not up to expectations, hoist the warning flag as far as further expenditures for promotion are concerned. This is not to say that these expenditures are canceled, but it certainly does indicate that they should be very carefully considered.
3. It gives our Production Department a fairly firm bench mark on which to base their future production plans for this product, in addition to serving as a check against estimated production costs.

Another important point to which we give much attention is a continuing market research study of each research project as it proceeds. This means that any likely candidate that comes from our research program is carefully studied, marketwise, depending on its properties. This minimizes the possibility of our carrying some compound forward through extensive and expensive toxicity and clinical work only to discover at a later date that the product could not compete in the market place. We have found that it is not only important to get market research into the picture at the initiation of the research program, but that it is equally important to keep market research on the job as the research work progresses.

Another important consideration in the development of any new product is its cost. We have found it necessary to follow rather closely, on a cost basis, the new product coming out of research.

It is obviously foolish to carry a product up to the marketing stage and then find that it must sell at a higher price than a competitive product which does an equally effective job.

Another important aspect of new product development is an early determination of sales interest in the type of product for which we are searching. While such an early expression of sales interest might not

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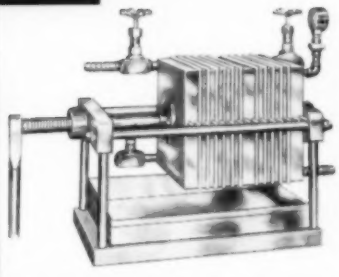

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be necessary in research aimed at getting a cancer cure, a new super-antibiotic, or an improved anti-arthritic drug, we have found that this expression of interest of great importance in most of the areas of research with which we are concerned.

Because of this, we work very closely with the various sales divisions involved and keep the managers of these sales divisions closely informed on all of our research programs. Indeed, they are consulted on most of them before they are instituted because of the importance of their opinions.

The selection of a trade mark for a new product is very important and actually presents quite a problem. There are at least two schools of thought on trade mark selection at the present time:

1. The Trade Mark should be descriptive either of the compound or its use;
2. The trade mark should not be descriptive but should be of such a character that it can be very easily remembered.

Members of the two schools are very prone to give you outstanding examples to prove their contention, but it is very difficult to demonstrate conclusively that either is right. As an example of the second school of thought, one of the most outstanding tranquilizing drugs on the market today has as its trade mark the name of a town in New Jersey in which, I understand, it is produced. Certainly the trade mark is easily remembered, and indeed one of the members of our company went so far as to suggest that the next new product that Pfizer comes out with should be trade marked "Brooklyn."

Our latest attempt to get a collection of possible trade names involved assembling certain syllables which we felt were suitable and then putting these syllables through an IBM electronic machine so that they would be combined in every possible way. By this method we have assembled a book containing about 25,000 names from which we expect to choose some suitable trade marks. Incidentally, I don't believe this was an original idea with Pfizer. Another pharmaceutical company is said to have done the same thing.

An important function in any new product development program is the preparation of New Drug Applications and their submission to FDA. Our new product coordination group handles this entire job, and we have found it very important to accumulate rapidly all of the information which we know FDA will require on a particular product and submit it at the earliest possible date as a completed NDA.

Pfizer's research department, of course, works very closely with the Legal Division regarding patent matters and assists them in filling out patent applications. One of the check points of the coordination group, however, involves clearance with the Legal Department to make certain that a new product is free of any legal complications. It is very important that all legal aspects be checked at a very early stage so that

much research and development work is not carried out needlessly.

One of the check points that the coordination group also has on their list is to consult with the legal department before any new product is marketed to be certain that we have secured all possible patent protection for that specific product.

RUTGERS PHARMACEUTICAL CONFERENCE

(Continued from page 764)

1. Products will be even more potent, specific and stable than they are today. The most dramatic will be in the field of internal medicine and will focus on the chronic degenerative diseases and virology. The industry, which devotes the highest proportion of its resources to research, may be investing as much as eight per cent in 1966 "to reach further and further into new research fields as yet unconquered."

2. Physicians will have to know more than ever before every action and side-reaction of prescription specialties, and pharmacy will help them. Pharmacists will assume a far heavier responsibility as the "final professional safeguard" for patients, and this must affect both their public relations and inter-professional relations. A higher percentage of pharmacists will share in the total national prescription business, as the important trend in this direction continues.

3. The higher cost of medicines with higher potency and the cost of their shipment will necessitate faster delivery, improved cartons, more liberal returned-goods policies, and an all-out effort scientifically to eliminate dates on packages. Obsolete bulk selling practices circumventing normal distribution will be discarded. Retail pharmacies will know more about inventory control and will check shelf life and capital investment more effectively.

4. Far fewer duplicates will come on the market, because manufacturers will have learned "the harsh economic lesson that development of new and different specialties is more profitable than duplicating standard medications." Better medicines and specificity of action will also make duplication more difficult.

5. Pharmacists and wholesalers will learn all about new products before the detailed story goes to the physician. Physicians will be encouraged by manufacturers to visit their pharmacist in order to close the gap between them. More physicians will depend on pharmacists as new product consultants and will check new specialties in the pharmacies.

6. Public relations for all segments of pharmacy will be much improved in 1966, largely through the efforts of the Health News Institute and the National Pharmaceutical Council, providing "Mr. Public with a post-graduate course in Prescription Appreciation." Furthermore, a well-informed public with media less afraid of "taboo" subjects, must facilitate good public relations.

7. Continuously successful research, basis of the industry's reputation, will obviate deep involvement

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of government in research. The pharmacist will maintain his reputation as a professional man not only through his own efforts, but through the flow of better educated apprentices from pharmacy colleges.

In speaking on What the Pharmacist Thinks of Public Relations, Louis Stritzler criticized the type of thinking on the part of the pharmaceutical manufacturer who considers the pharmacist nothing more than a tradesman who lives off the demand created by the manufacturer. Also he criticized the actions of a pharmaceutical manufacturer who indulges in a blitzkrieg detail, consisting of sending about twenty high-pressure detail men into a small area, thus creating a demand which causes the druggists to buy large amounts of the products detailed. His complaint was that the druggists never see "hide nor hair of another detail man from this company for perhaps six months, and meanwhile the supply lays upon our shelves until we get tired of looking at it and send it back for credit."

Another complaint of Mr. Stritzler was the action of proprietary drug manufacturers who write to grocery store owners informing them that they will protect them in complaints brought against them for selling drug products. He also complained about wholesale druggists who have "divisions" which are a few salesmen calling on no-drug outlets. He also complained about the wholesalers' attempts to load retailers up with six months supply of goods which do not have to be paid for until sold.

On the subject of substitution, Mr. Stritzler said:

"Good trade relations certainly cannot long exist when we have a hard core of retailers who unfortunately will buy a substitute for almost anything. Let a manufacturer come out with a worthwhile new product and right away these druggists are on the market to buy 'something just as good.' Their answer is: 'It has the same chemical composition. Look, it says so on the label.' To them it makes absolutely no difference that a reputable manufacturer has spent large sums of money to develop and test their product. All they are interested in is that the label reads the same, and they can buy it for so much less. I deprecate this practice. I abhor substitution. I earnestly believe that if the Boards of Pharmacy throughout the country were stricter in their penalties, that would help to wipe out this evil practice from our profession. The physician prescribed the brand he has faith in. The public wants the brand the doctor has prescribed, and they are entitled to receive it without any question. In my book, anything less is downright cheating, and cheaters don't belong in the Profession of Pharmacy."

THE PACKAGE—FROM THE IDEA TO THE PRODUCTION LINE

(*Continued from page 775*)

line evaluation determines if the package can be handled on the line—and if capable of handling, how it should be handled. Should it be on a fully or par-

tially mechanized set up, or on a manual one? Is new machinery required? Will the package fall into the present methods picture? Could a contract packager handle it better and at lower cost?

The production team member next prepares a cost estimate covering both materials and methods. The choice of the package is then made based on the ratings of:

Functional design. (Is it a "good" package?) Machineability. (Does it handle satisfactorily on the line?) Aesthetics. (Is it attractive? Can it be nicely decorated? Will it do a real job of carrying the sales message?) Shippability. (Can it withstand transportation and warehousing?) Total finished cost. (This includes the price of the container and the cost of running it.)

Last comes the preparation of specifications. The package laboratory member handles design and construction, and the New York coordinator, the artwork. The specification is a significant item because it ties together the loose strings. It brings in the modifications found necessary by laboratory and finishing line. It spells out the inside, intermediate and outside packages for the convenience of the scheduling department (which will requisition), the purchasing department (which will buy), and the control department (which will inspect and pass for conformance to standards).

Usually the deal is first produced for a "test city." The test city operation very often uncovers some bugs concerning the package or finishing methods which can be worked out prior to going "on stream" nationally.

Very important to the company's packaging program is the matter of keeping abreast of new ideas and developments. The package laboratory is specifically charged with a continuous active program on studying and testing new containers and materials of construction. The machinery and methods development unit in the production department is charged with keeping abreast of machinery, equipment, and methods.

Today's highly competitive toiletries industry requires that a company "run just to keep in place." Packages and packaging are an integral part of the business and hence call for a sound planning program. Perhaps some of the points of our package program may be of value in your company. We do not claim possession of a "utopia," but we feel we have a program that is convenient and workable.

Pediatric Patterns

Parke, Davis & Company is publishing Pediatric Patterns, a publication containing last-minute reports on poliomyelitis, diphtheria, streptococcal infections, measles, and whooping cough to be circulated at regular intervals to some 140,000 physicians throughout the U. S., Alaska, and Hawaii.

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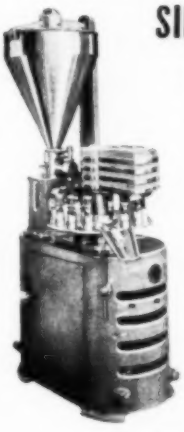

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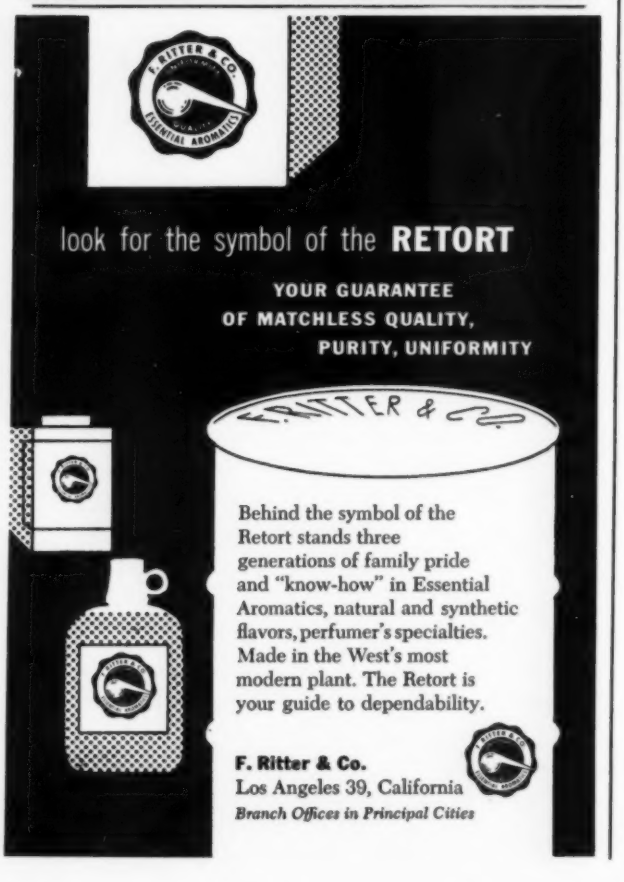
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(Continued from page 771)

Whether this kind of thinking and this way of operating is economic and good for American business will have to be decided in the next decade. The facts today are that an increasing per cent of packaged, branded goods, notably in processed food, proprietary medicines and toilet articles are headed for this sales formula.

Possible Pitfalls

It would be nice if American business could have its cake and eat it. That is, it would be very acceptable to business men if we could continue this stimulating eagerness of the American consumer continually to try something new and at the same time discover some way of avoiding what may prove to be a pretty substantial price to pay for this eager alertness at the point of advertising.

The price will be high if the so often naive, enthusiastic, eager-to-try American consumer some day changes mood, becomes somewhat disillusioned, decides not to be so eager to experiment. The price will be high for breakfast food, for instance, if the American mother wearies in purchasing a succession of foods, not because of nutrition, or flavor or some other food value, but because of the latest successor to Davy Crockett, the latest premium or the newest promotion stunt.

Because the consumer has been so responsive to something new, or to something that just looks new, or to a gimmick, a gadget or an inducement to get something else for free, the advertising dollar seems to be working more effectively and more productively now than ever before. That this may be a dangerous illusion is indicated by the brief life cycle of so many widely advertised brands. It may be not advertising, but the current mood of this present day consumer that makes a great deal of current advertising look so wonderful.

We don't pretend to know the answer. We just ask:

1. Are we overdoing product and package obsolescence?
2. Are we overdoing gimmicks, gadgets, premiums and stamps as a way to sell goods, rather than persuading customers to want goods because of the benefits they receive from those goods?
3. Are we spoiling the public's zest for creative thinking in product development, in packaging, etc. by jumping the gun on half-baked ideas and inventions, and by over-promises and tongue-in-cheek campaigns on "miracle discoveries?"

We seem to have succeeded, in this ten year period, in changing the loyal customer to the eagerly willing disloyal one. This change has helped bring us a great boom. Let's hope we never change to the disillusioned, or disgruntled customer. That would be a tough price to pay for these gay business days.

(Continued from page 792)

8. A bill simplifying review of Patent Office decisions by eliminating one of the two alternative appeals now open to applicants.
9. A bill requiring publication of interference counts after termination of the motion period and before the taking of testimony so as to give a warning to manufacturers of the possibility of delayed issuance of patents involved in interference between two applicants.
10. A bill to establish a single Court of Patent Appeals. S. 3714 was introduced on April 26, 1956.

In addition, the subcommittee is considering a number of other bills relating to patents, trademarks and copyrights as follows:

S. 116 (companion bill H. R. 2128 presently pending before the House of Representatives): To authorize the extension of patents covering inventions whose practice has prevented or curtailed during certain emergency periods by service of the patent owner in the Armed Forces or by production controls.

S. 215: An act to amend the Trademark Act in certain particulars.

S. 590: Relating to the rendition of musical compositions on coin-operated machines.

S. 672: For the relief of Richard T. Harvey by the renewal and reviving of patent application No. 320,998.

S. 683: For the relief of Ashley G. Ogden by payment of a sum in satisfaction of his claim against the United States for use of an invention submitted to the National Inventors Council.

S. 1815: To confer jurisdiction upon the Court of Claims to hear, determine, and render judgment upon the claim of Antoine Gazda for use of certain patents.

S. 1968: To amend the act of June 30, 1950, relating to the extension of the terms of patents of World War II veterans.

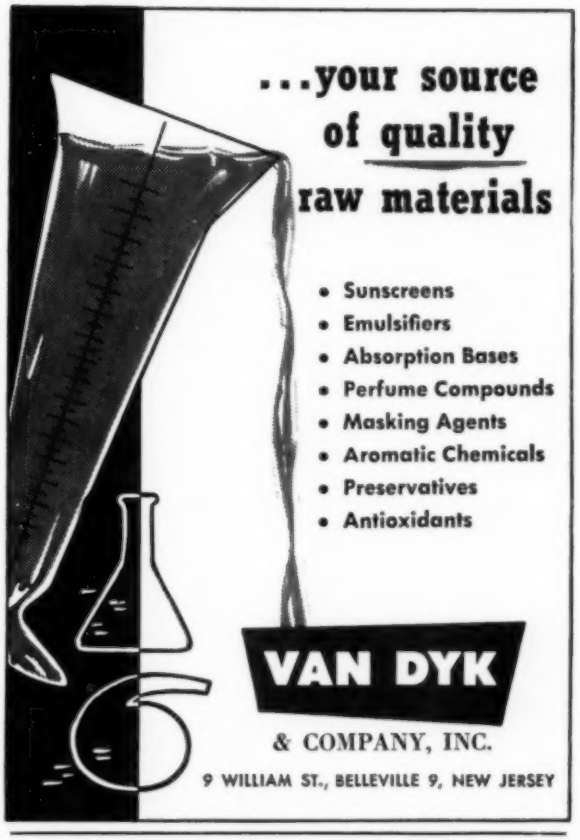
S. 2233: To extend and renew letters patent relating to vehicle-door hardware.

5. *Additional hearings on certain patent problems*

Antitrust-patent problems, the patent policies of the Federal government and the international aspects of patents are indicated as subjects for future hearings.

6. *Conclusion*

The report notes that no basic changes in the Patent System or its underlying principles have been made since 1836. Yet there has been a dynamic development industrially, technologically and economically. Relatively simple inexpensive inventions have given way to highly complex inventions that require extensive scientific training to understand and substantial experimentation and capital to develop and perfect. The present writer cannot at this point hold back the comment that the foregoing statement may come as a surprise to the many business people who read a weekly review of patents in a very well-known news-



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paper. That review seems to feature the frivolous type of invention.

Perhaps the following paragraph is the most significant in the entire report:

"The genius of the architects of our patent system, like the genius of those who framed our Constitution, to some extent anticipated these basic shifts and built a structure that was adaptable to them and sufficiently flexible and far reaching in its underlying principles as to be able, with an occasional patching here and a shoring there, to weather these changes and continue to carry out with maximum effectiveness the constitutional purpose of 'promoting the progress of science and useful arts.' One cannot, however, question the desirability of an inquiry, as suggested by Judge Hand, to determine to what extent this is so and, even where it is so, to ascertain what patching or refurbishing may be desirable if the patent system is to perform even better in today's society."

McDonough Hair Waving Patent Invalidation Sustained on Appeal

The U. S. Court of Appeals, 2nd Circuit, sustained the lower court decision holding the McDonough permanent waving patent, U. S. 2,577,710, invalid.

Details on the lower court decision and the Special Master's report were noted in the February and June, 1951, issues of This Journal.

RECENT PATENTS

2,741,574—**Strong Cobb & Co.—Stable, Aqueous Injectable Procaine Hydrochloride Aminophylline.**

2,741,577—**Chas. Pfizer—Microbiological Oxidation of Idonic Acid to 2-Keto-l-Gulonic Acid.**

2,741,604—**Merck—Penicillin Salts.**

2,741,608—**Research Corp.—5-Formyl-5, 6, 7, 8-Tetrahydropteroic Acid and Amides.**

2,741,609—**Merck—N-Propylnormorphine Compounds.**

2,741,610-15-17—**Merck — N - Substituted Norcodeines and Norcodeinones.**

2,741,611-14-16—**Merck — N - Substituted Normorphines and Normorphinones.**

2,741,619—**Sterling Drug—Alkyl 1-Alkyl-4-Cyclohexylpiperidine-4-Carboxylates.**

2,741,620—**Cilag — Hydroxymethyl - Isonicotinamide.**

2,741,626—**Chas. Pfizer—Hydroxylated Steroids.**

2,741,635—**Ciba—Thiosemicarbazones of Alicyclic Monoketones with a Benzene Nucleus Condensed in α, β-Position.**

2,742,393—**Olin Mathieson — Derivatives of 2 - Mercaptopyridine-1-Oxide.**

2,742,394—**Le Gear Medicine Co.—Oil of Chenopodium Compositions.**

2,742,395—**Commercial Solvents — Alleviating Topical Fungal Infections with a Bromo Nitro Ether.**

2,742,396—Purdue Research Found.—Ointment Base.
2,742,397—Commercial Solvents — Analgetic Compositions of N-(1-Methylpropyl) Cyclohexylamine.
2,742,434—General Aniline—Cleaner-Sanitizer.
2,742,460—Eli Lilly—Substituted Piperidinopropane Salt of Penicillin.
2,742,461—Am. Cyanamid—Pregnanes.
2,742,462—Norwich Pharmacal—N - (5 - Nitro - 2-Furfurylidine)-3-Amino-2-Oxazolidones.
2,742,463—Hoffmann-La Roche—Dichlorostyrylpyridinium Compounds.
2,742,465—Am. Home Products—Amine Salt of Penicillin.
2,742,467—Farbwerke Mainkur — Hypotensive Drugs.
2,742,468-9—Am. Cyanamid—Substituted Tetrahydro Pteridines and Hydroxypteridine Oxides.
2,742,470—Nepera Chem. Co.—Quaternary Ammonium Salts.
2,742,472—Burroughs Wellcome — Spasmolytic Piperazines.
2,742,475—Ciba—Azacycloalkanes.
2,742,476—Olin Mathieson—2-Mercaptopyridine 1-Oxide.
2,742,480—Chas. Pfizer — Isonicotinic Acid Process.
2,742,481—McNeil Labs.—Dialkylaminoimidazolines.
2,742,483—Sterling Drug—Crystal Violet Lactone Process.
2,742,485—Francesco Vismara (Italy) — Testosterone Process.
2,742,486—Upjohn—Production of 17β-Acyloxyandrostane-3, 6-Dione.
2,742,491—Merck — β - Aminopropionitrile Process.
2,742,504—Nepera Chemical Co. — Heptadecylamines.
2,743,268—Eli Lilly—Erythromycin-Penicillin.
2,743,269-70—U. of Michigan—Heterocyclic Nitrogens.
2,743,271—Merck — Optically Active Alkaloidal Salts of Etienoylpyruvic Acids.

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Marco Flow Master equipment, stainless steel, Roto Feed Continuous Mixer, KACR Reactor, Kom-Bi-Nator 200 GPH, Homogenizer AC-500, DP-Dry Proportioner, AC Pump, M-100 Pump. Perry Equipment Corp., 1429 N. 6th St., Phila. 22, Pa.

FOR SALE: 2-75 gal. Day Stainless Steel Jacketed Double Sigma Blade Mixers; 2-200 gal. Stainless Steel jacketed vertical Mixing Reaction Kettles. Best Equipment Company, 617 Davis Street, Evanston, Illinois. DAvis 8-0926.

Machinery Wanted

TUBE FILLING AND CLOSING MACHINE, automatic, must be in good working order. Call A. Polt, Chelsea 3-0148.

Help Wanted

Unusual opportunity for a top notch
PERFUMER
with a following in the trade to join a well financed reputable and established firm in the field on a profit-sharing basis eventual partnership. Write in detail of past experiences, present connections and all pertinent information which will be kept highly confidential to Box M-3.
Drug & Cosmetic Industry
101 West 31st Street, New York 1, N. Y.

PHARMACEUTICAL PRODUCT DEVELOPMENT MEN: Excellent position for PHD's or equivalent with sound technical and industrial experience. Applicants should be actively engaged in the experimental preparation of dosage forms. Creative thinking a requisite. Salary open. Box J-2, DRUG AND COSMETIC INDUSTRY.

Situations Wanted

SALESMAN: Graduate Chemist, 35, eight years experience contacting soap, chemical specialty, cosmetic and toiletries manufacturers. Desire sales position offering opportunity for advancement. Box J-1, DRUG AND COSMETIC INDUSTRY.

Business Opportunities

SAVE UP TO 50 PER CENT! Ceresin 12c; Glyceryl Monolaurate 22c; Glyceryl Monostearate (Aldo No. 28) 20c; Alcolan 30c; Lanamine 24c; Cerelan 35c; Cholesterol $3.25; Solprotex $3.25; Methyl Salicylate 43c; Sodium Benzoate 40c; Gum Tragacanth Pdr. 50c; Tannic Acid NF $1.50; Acenaphthol 25c; Geraniol Residue 20c. Firmenich Aromatics—Vetyrisia, Mongolia, Jasmin, Bergamot, etc., Chemical Service Corp., 90-02 Beaver St., New York 5. HAnover 2-6970.

DRUG PRODUCTS WANTED: A leading, nationally known, drug manufacturer, subsidiary of an internationally renowned ethical drug company, wishes to expand its proprietary drug business through the acquisition of companies or products having annual sales volume of $1,000,000 or more with a pattern of national distribution in the drug field and backed by consistent advertising. This company has broad and continuous experience in the successful marketing of proprietary drugs. If interested, write to Box A-1, DRUG & COSMETIC INDUSTRY.